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ABSTRACT

This document contains learning activities to help middle school girls begin the career planning process and resist gender-role stereotyping. The activities are designed for individuals and/or groups of girls either in classroom settings or in organizations such as Girl Scouts and 4-H Clubs. A total of 30 activities are organized into 4 sections as follows: 8 activities to help girls discover and recognize their interests, skills, and values; 8 activities examining how certain talents and interests might eventually lead to certain careers, how gender-role stereotyping may influence the career planning process, and how stereotyping may be resisted; 10 career exploration activities emphasizing the wide variety of careers requiring some knowledge of science and math; and 4 activities explaining how to obtain information needed to set personal career goals by interviewing family and friends, individuals in actual workplaces, and/or mentors and by touring workplaces. Purpose, time, materials needed, and procedure for each activity are described. Concluding the document are the following: answers to one of the exercises; lists of handouts and readings included in the document; and lists of publishers of 4 magazines for girls, 11 publications about gender equity and career planning, 20 organizations providing career-related information, and 13 organizations for women/girls. (MN)

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Exploring Work

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Fun Activities for Girls

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Exploring Work

Fun Activities for Girls

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Acknowledgments

With a few exceptions, the activities and readings contained in this book are a compilation of excerpts from the following materials published through the *WEEA* Equity Resource Center:

Add-Ventures for Girls: Building Math Confidence, University of Nevada, Reno, Nev.; *A-Gay-Yah: A Gender Equity Curriculum for Grades 6–12*, American Indian Resource Center, Tahlequah, Okla.; *Barrier Free: Serving Young Women with Disabilities*, YWCA of the City of New York, N.Y.; *Choosing Occupations and Life Roles*, Appalachia Educational Laboratory, Charleston, W.Va.; *Connections: Women and Work and Skills for Good Jobs*, Boston YWCA, Mass.; *America's Women of Color: Integrating Cultural Diversity into Non-Sex Biased Curricula*, St. Paul Public Schools, St. Paul, Minn.; *Equity Lessons for Secondary School* and *Equity Lessons for Elementary School*, School District of Philadelphia, Philadelphia, Pa.; *Expanding Options*, Center for Studies of the Person, San Diego, Calif.; *Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School*, Florida State University, Tallahassee, Fla.; *Going Places: An Enrichment Program to Empower Students*, San Diego City Schools, San Diego, Calif.; *How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science*, Lafayette, Colo.; *The Impact of Women on American Education*, University of Iowa, Iowa, and The American University, Washington, D.C.; *In Search of Our Past*, Berkeley Unified School District, Berkeley, Calif.; *Maximizing Young Children's Potential: A Non-Sexist Manual for Early Childhood Trainers*, Women's Action Alliance, Inc., New York, N.Y.; *Science EQUALS Success*, Charlotte EQUALS, Charlotte, N.C.; *Science, Sex, and Society*, Kansas State University, Manhattan, Kans.; *Sources of Strength: Women and Culture*, Far West Laboratory for Educational Research and Development, San Francisco, Calif.; *Spatial Encounters: Exercises in Spatial Awareness*, University of New Mexico, Albuquerque, N.Mex.; *Women in American History: A Series*, American Federation of Teachers, Washington, D.C.

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WEEA Equity Resource Center
Education Development Center, Inc. (EDC)
55 Chapel Street
Newton, Massachusetts 02158-1060
Editing by Pat Boland
Design by Julia Potter

Keep these in mind as you do the activities in this book . . .

The process of career decision making is ongoing and lifelong!

Everyone is suited to more than just one job and will probably change jobs several times during a lifetime.

The better you can match your abilities to a specific work situation, the greater your chances for happiness and success in work.

The more possibilities you consider, the more open you are to success.

Remember that you can succeed at any career.

For Adult Leaders, Teachers, Counselors, or Parents

You can help fire the imaginations of middle school girls as they begin thinking about and preparing for future careers. Counselors, teachers, or parents of young women, or leaders of Girl Scouts, Girls' Clubs, Campfire Girls, 4-H Clubs, or anyone who is looking for activities to use, especially on Take Our Daughters to Work Day, will find this career planning activity book a valuable career exploration and planning guide for the young women with whom they live and/or work.

Exploring Work is written to and for sixth, seventh, and eighth grade girls, and each activity can be completed by an individual, or done in a group setting, followed by members sharing the results. *Individual* or *Group*, or both, will be marked at the top right-hand corner of each activity. Most of the activities can be helpful for individuals or groups; a few are especially targeted to groups.

Exploring Work is designed to help girls discover more about their evolving talents and interests, how those talents and interests might lead to certain careers in the future, and what career planning steps they need to take as they move closer to high school. The activities are also designed to help girls become more aware of the influences of gender-role stereotyping.

The activities can be used in a number of ways:

- with individual girls on a one-time basis
- during a one- to five-day concentrated time period
- interspersed throughout a semester or program

Exploring Work

The activities are grouped into four sections, and each section has a distinct focus. While the sections and the activities are designed to build on one another, the activities can be just as valuable if completed out of sequence. Readings relevant to women and work are interspersed throughout. The readings range from historical information about women immigrants in the early part of the century to short profiles of successful women at work.

The beginning activities under Discovering Interests, Skills, and Values will help girls identify what their interests are and match those interests and skills to particular jobs.

The second section, Stereotyping: "Do I Have to?" gives girls the tools to identify how the gender-role stereotyping we are all exposed to affects *them*.

Section 3, Exploring Careers, links particular kinds of skills to specific jobs and guides girls through each activity, using some of the same skills that would be required in that job. This section demonstrates the variety of skills used in math and science careers. Although the numbers of women in math and science careers are low, they continue to grow as girls, who might otherwise not consider them, are encouraged to explore these fields. This section focuses on fun activities related to math and science skills, since so few girls choose careers in math and science.

Set Your Own Career Goals, the last section, helps girls take what they have learned about themselves, and move into the larger world of the workplace as they choose and work with a mentor and visit workplaces.

Finally, at the end of each section, Reflection gives girls the opportunity to write down what they have learned from the activities and readings in that section. Ask the girls to share their valuable insights with you and with the rest of the group. ✦

Chart Your Course—Career Planning for You!

Chart your course! Plan your life! Think about where you want to go and decide what you need to do to get there. This may be a challenge if you are exploring work options for the first time. But you are your own best ally in planning your future. Enlisting the help of an adult you like can make the process even more fun. Completing the activities in this book can help you find your place in the world and move toward your goals.

Do you want a job that gives you wealth, independence, security, excitement, or self-esteem? Or all of the above? You *will* need to make choices, and the choices you make every day at home, at school, and in your leisure time can tell you something about yourself. Career choice cannot be treated apart from choices about family life, leisure, and community service.

Some of you may be in a classroom, a club, or home setting where you get a lot of encouragement to think about and plan for your future, and some of you may already know exactly what kind of career you would like to work toward. Or, perhaps you have not thought much about careers at all.

Whatever the case, some day in the near future you will be on your own in the work world. It is up to you to plan for and choose work that uses your natural talents, that you enjoy doing, and that is exciting to you to learn about!

These activities can help you

- discover and recognize your interests, talents, and skills
- analyze your strengths and abilities in relation to careers
- understand and be aware of how being a girl influences what other people think of you
- resist imposed influences
- make informed choices

But with so many choices out there, how can you choose only one direction? And what if you choose and take courses that help you learn more about a particular area and then change your mind? Expect to change your mind! That is the point of gathering information and exploring; to find out for yourself—by doing—what it is you truly enjoy and are excited by. Remember that you will probably have more than one job experience.

Whatever your goals, they will be influenced by many things such as your gender, family, location, age, education, and so on. Your possibilities for success in finding a good job or career fit are also influenced by what jobs are available, as well as your skills and talents.

Inside *Exploring Work*

This activity book has been designed to guide you through this decision-making process; to help you understand more about what you like and dislike, and how you can make decisions about work in the future.

Each activity includes suggestions for completing the activity on your own or in a group. Some of the activities are for group use only; you'll see the categories in the Contents.

The Readings interspersed throughout will tell you something about girls and women from long ago and the barriers they faced in the workplace, and also about women today who followed their dreams and overcame barriers to reach their goals.

If you are working on any of these activities by yourself, it will probably be fun for you to share your results with someone. A teacher, counselor, coach, parent, another student, or any other person you admire. Ask for their support as you chart your course!

If you are working in a group, we also encourage you to share your results—the group sharing can be fun, and you will learn about more and different career options by hearing how other girls answered the questions.

After you have completed the activities you will understand more about

- your interests and skills, and how they relate to careers
- how to use resources to learn more about specific careers
- how to make decisions, be assertive, and set and accomplish goals
- what occupations are most interesting to you ✦

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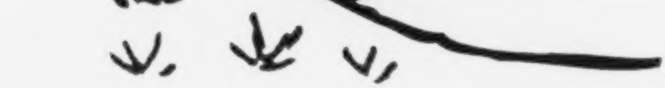
Discovering Interests, Skills, and Values

Do you know that, right now, you are making decisions that will affect you the rest of your life? You are deciding what courses to take, how hard to study, and how to treat others. You are deciding whether to think for yourself or let others think for you. In this section, you have an exciting opportunity to learn more about yourself by doing activities that will help you discover your interests, skills, and values.

Once you have a clearer understanding of why you make the choices you do, you can make better decisions, more of the time. The better decisions you make, the more control you have over your life!



Activity 1

Instant Autobiography

Individual or Group

Purpose

This information will help you to think about what you like to do, and how that can be what you do as an adult.

Time

1 hour

Materials

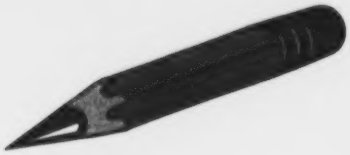
"Instant Autobiography" handout

Procedure

If you are working on this by yourself, this information can help you think about how what you like to do can be what you will do as an adult.

If you are working in a group, pair up with a girl you don't know well. After all members of the group have completed the form, introduce your partner by telling the group the information on her form. Make sure that you only write information about yourself that you are willing to have your partner share with the entire group.

Instant Autobiography



Complete this form with your own answers.

1. Name

2. Grade

3. If I could be really good at something, I would like that something to be

4. I am happiest when I am

5. Going to high school will be or is

because

6. I think an ideal career for me would be

7. One of my hobbies/other interests is

8. A career that my family would like me to pursue is

9. One of the ways my family have encouraged me is

because

10. After I have shared my instant autobiography with someone (the group or an adult), I want to add

Women Immigrants

More than thirty million immigrants came to the United States between 1820 and 1940. Many women left their native lands to escape from horrible circumstances at home. Once here, they encountered similar life experiences and problems. The Irish came to escape from the potato famine of 1845. Mexicans came to escape the Revolution of 1910. The Jews of Eastern Europe came to escape the pogroms—campaigns of religious persecution.

As American factories developed, immigrant labor became very important. Most of the immigrants were poor and unskilled. They had no choice but to accept the lowest paying and the least skilled jobs. They became maids, cooks (in homes), farm workers, and workers in food processing plants and laundries, and they worked in factories that made clothing and textiles.

Women also worked long hours, often up to thirteen hours a day. Many women with children were forced to work on the night shifts. These women had the double burden of factory work and housework.

Jobs were generally divided along gender lines. Men cut out and pressed material while women finished the garments and sewed on the buttons. Men did the baking, and women frosted the cakes. Men bakers received $100 a month and women received $22 a month.

Excerpted from In Search of Our Past: U.S. History Teacher Guide

Activity 2

Interests Suggest Careers

Individual or Group

Purpose

To help you better understand your interests and how those interests fit with certain careers

Time

1 hour

Materials

"Interests Suggest Careers" handout

Procedure

If you are completing the activity on your own, share the results with another student, or a teacher, counselor or parent, and ask for their input. If you are working in a group, divide the group into small groups to help you brainstorm the last two questions in the activity, which ask you to think about what careers might be related to your interests. Then, share with the whole group your top three interests and the one career you find most appealing.

6

Interests Suggest Careers

Write your answers in the space indicated.

1. What do you like to do in your free time?

2. What are your favorite subjects in school?

3. What jobs do you do now? (include anything you consider a job, for example, paper route, cookie sales, baby-sitting, chores, or volunteer help)

4. What do you enjoy learning more about in your free time?

5. List other interests of yours; write down as many as you can think of.

6. An interest in seeing how things work and fixing them or making them work better could suggest an occupation as a mechanic or an engineer. From your listed interests, choose three favorites, and for each, list a related career. Refer to the "Matching Skills" activity to get a bigger picture of what careers require what set of skills.

Interests

1.

2.

3.

Related Careers

1.

2.

3.

Chinese and Japanese Immigrants

The Chinese immigrants came with ideas that were different from those of many of the other groups. At first, only Chinese men came to America. They came solely with the idea of making money and then returning to China. However, most did not return. At the turn of the century, there were thirty Chinese men here for every Chinese woman. The Japanese also came with the idea of returning to Japan. Forced to stay, many of them sent home to Japan for mail order brides. The "picture-bride" practice increased the female population substantially.

By 1940 many Japanese women had come to the United States alone. They came with a mixture of feelings that included fright, apprehension, sadness, excitement and hopefulness. They all came with the determination to make new and better lives for themselves.

Excerpted from In Search of Our Past: U.S. History Teacher Guide

Activity 3

Matching Skills

Group

Purpose

To give you some real information about what skills are needed in what kinds of jobs, and how those skills can be used in a variety of different jobs

Time

2 hours

Materials

Large sheets of paper to write on

Markers

“SKILLS” handouts

“OCCUPATIONS” handouts

Procedure

Matching Skills is an auction game to get workers and employers together. Workers with SKILLS want good jobs. Their talents are “up for bid.” Employers in OCCUPATIONS need skilled workers. They’ll make job offers to attract new employees to their companies.

To decide what job to take, players who are SKILLS should ask about

- what they’ll do on the job—job tasks
- how much they can earn—job wages
- if this job falls through, what related jobs are possible—job mobility

To attract good workers, players who are OCCUPATIONS should “sell” the job by describing

- how the worker’s skill matches the job tasks
- how much money the job pays
- how the job experience can help the worker in other related jobs

To Play the Game

1. If you are SKILL #1, step forward and read your skill page aloud with lots of feeling. Your skill is now "up for bid."
2. If you are an OCCUPATION, look at your page to see if your occupation needs this skill.
3. If your occupational field needs this skill, try to convince the SKILL to take your job. "Sell" it by enthusiastically describing its advantages. Answer any questions the SKILL asks.
4. Before making a decision, a SKILL should be sure to find out everything possible from the OCCUPATIONS making the bids. Ask questions like "What's good about your job?" "What else can I do with my skill in your field?" "What is it that I've got that you want?"
5. Now, SKILL #1, choose the occupation you wish to enter and stand next to the player whose bid attracted you.
6. SKILL #2 steps forward next and play continues until all the SKILLS have gone "up for bid" and have chosen offers from OCCUPATIONS.

SKILLS

SKILL #1

I Can	Make Motors and Engines Run			
I Can Work on	Valves	Electric Motors	Gas and Diesel Engines	
	Ignition Systems	Radiators	Generators	Gear Trains
	Transmissions	Carburetors	Spark Plugs	Oil Changes

SKILL #2

I Can	Use Math			
I Know How to	Use Computers	Analyze Statistics	Estimate Costs	
	Read Rulers	Read Gauges	Read Meters	Write Well
	Use Fractions	Use Decimals	Estimate Distance and Height	

SKILL #3

I Can	Draw, Read, and Follow Diagrams		
I Can Work on	Blueprints	Graphs	Mechanical Drawings
	Electrical Circuitry	Electronic Circuitry	
	Architectural Plans and Symbols		

SKILL #4

I Can	Read and Write Well		
I Know How to	Spell	Analyze a Book	Write
	Outline an Idea	Organize	Revise a Text
	Review a Paper	Give Positive Feedback	

SKILL #5

I Can	Use My Body Efficiently		
I Know How to	Carry Tool Kits	Balance Well	Lift and Balance Ladders
	Dance	Climb Scaffolding	Endure Lots of Physical Work
	Measure	Do Puzzles	

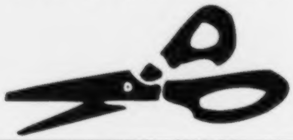
SKILL #6

I Can	Cook Well		
I Know How to	Use a Stove	Mix Ingredients	Use Cooking Equipment
	Buy Food	Measure	Lift Heavy Pots and Pans
	Plan Meals	Be Creative in the Kitchen	

SKILL #7

I Can	Teach Others What I've Learned		
I Know How to	Speak Well	Listen to Others	Write Well
	Motivate Others	Guide Others	Read Well
	Plan Presentations	Analyze Outcomes	

OCCUPATIONS



My Occupational Field Is . . . Carpentry and Cabinet Making

I need people who can . . . Use machine and power tools

I'll hire and train you as . . . A Carpenter

Your tasks will be to . . .

- Use power saws to cut wood and erect frames for buildings
- Install doors, build stairs, and lay hardwood floors
- Use power drills and rivet guns for finish work

The job pays up to . . . $45,000

With your skill you also can . . .

- Build and repair furniture, cabinets
- Install Sheetrock
- Build concrete forms, scaffolding, and temporary shelters on construction sites

My Occupational Field Is . . . Drafting

I need people who can . . . Prepare technical drawings used to build things

I'll hire and train you as . . . A drafter

Your tasks will be to . . .

- Prepare technical drawings used by production workers to build spacecraft, industrial machinery, buildings, bridges, and other structures
- Fill in technical details, using drawings, rough sketches, and calculations made by engineers, surveyors, architects, and scientists
- Determine the specific materials to be used and the procedures to be followed in order to carry out the job

The job pays up to . . . $50,000

With your skill you also can . . .

- Use computer aided drafting systems
- Use technical handbooks, tables, and calculators
- Work in other math-, science- and engineering-related professions

My Occupational Field Is . . . Book or Magazine Editor

I need people who can . . . Choose good books or magazine articles to publish

I'll hire and train you as . . . A Book or Magazine Editor

Your tasks will be to . . .

- Assign topics to writers
- Read and analyze manuscripts/articles
- Work with authors on revisions
- Rewrite and edit manuscripts and articles

The job pays up to . . . $50,000

With your skill you also can . . .

- Plan budgets
- Negotiate contracts with authors
- Work in newspaper publishing

My Occupational Field Is . . . Auto Mechanic

I need people who can . . . Repair and service cars and light trucks

I'll hire and train you as . . . Automotive service technician

Your tasks will be to . . .

- Diagnose the source of the problem
- Use a variety of testing equipment to locate the problem
- Fix the problem
- Inspect, lubricate, and adjust engines

The job pays up to . . . $45,000

With your skill you also can . . .

- Repair and service motorcycles, trucks, and buses
- Use electronic service equipment such as infrared engine analyzers and computerized diagnostic devices
- Use power tools such as pneumatic wrenches, lathes, and grinding machines

My Occupational Field Is . . . Engineering

I need people who can . . . Design machinery, products, and systems for efficient and economical performance

I'll hire and train you as . . . An Engineer

Your tasks will be to . . .

- Determine the general way a product needs to work
- Design and test components
- Evaluate the design's overall effectiveness, cost, reliability, and safety

The job pays up to . . . $70,000

With your skill you also can . . .

- Use computers to solve mathematical problems
- Work in laboratories, construction sites, or industrial plants where you inspect, supervise, or solve on site problems
- Work in the medical, computer, or missile guidance fields

My Occupational Field Is . . . Chef

I need people who can . . . Prepare meals that are tasty and attractive

I'll hire and train you as . . . A Chef

Your tasks will be to . . .

- Plan menus, and measure, mix, and cook ingredients according to recipes
- Direct the work of other kitchen workers
- Estimate food requirements and order food supplies

The job pays up to . . . $46,000

With your skill you also can . . .

- Supervise or manage food service personnel
- Work in commercial food preparation in any institution, such as hotels, restaurants, schools, or grocery stores
- Go into business as a caterer or restaurant owner

My Occupational Field Is . . . Teacher

I need people who can . . . Instruct students in a variety of ways

I'll hire and train you as . . . A Teacher

Your tasks will be to . . .

- Design classroom presentations to meet the needs and abilities of all students
- Plan and evaluate lessons, prepare tests, grade papers, meet with parents and school staff, and analyze student achievement
- Update your skills to utilize the latest technology in the classroom
- Help students choose courses and careers, and help them with their academic problems

The job pays up to . . . $40,000

With your skill you also can . . .

- Design curriculum and choose textbooks
- Evaluate teaching methods
- Teach a variety of subjects

True Stories of Factory Life

The female factory worker was usually young—between 16 and 26—single, white, and an immigrant or the child of immigrants. (Few Black women or men were able to get factory jobs except in laundries.) Beginning in the 1890s, the generally wretched conditions in the sweatshops and mills where women and children worked began to attract the attention of reformers and state legislatures. Factory inspectors and investigators presented a shocked public with documented evidence of the unhealthy and dangerous conditions that factory workers endured for long hours and low pay.

For example, women who spun linen thread in Paterson, New Jersey, mills stood year-round on a stone floor in water, with a spray of water constantly hitting them on the chest. Women and children who breathed in the moist, lint-filled air of Southern cotton mills spit so frequently that the floors were slimy. And those working in the manufacture of tobacco, cleaning fluids, and paint constantly inhaled dangerous fumes. Workers in these industries were susceptible to tuberculosis, pneumonia, and other respiratory diseases.

Excerpted from Women in American History: Women in the Progressive Era 1890–1920

Activity 4

My Skills and Interests

Group

Purpose

To identify personal skills

Time

1 hour

Materials

"My Skills and Interests" handout

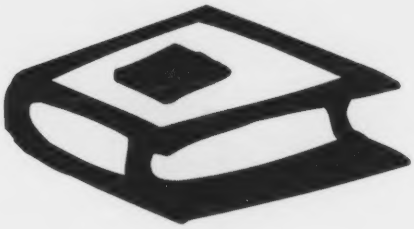
Dictionary

Felt-tip color markers

8 1/2" x 11" paper

Procedure

Begin by working at the activity individually, and spend some time sharing your responses in the full group. Record your responses with felt-tip markers on 8 1/2" x 11" paper and "paper" the room with them. Be aware that some terms may have to be defined—that is, you will need to look them up in the dictionary.



My Skills and Interests

Circle the skills that you find most satisfying and enjoyable. Look up words you don't know. Think about skills you have not used that sound interesting.

adjusting
administering
advocating
analyzing
assembling
bookkeeping
budgeting
calculating
communicating
constructing
coordinating
counseling
defining
delegating
designing
directing
dissecting
drawing
educating
enlisting
estimating
evaluating
explaining
fund raising
improvising
initiating
interpreting
investigating
leading
lobbying
managing
measuring
motivating
negotiating
operating
organizing
outlining
performing
persuading
planning
programming
promoting
public speaking
reading
reconciling
recruiting
reporting
researching
solving
summarizing
supervising
synthesizing
training
trouble-shooting
visualizing
writing

List additional skills of yours in the spaces below.

____

____

____

____

Put a star in front of your five favorite skills; these would be skills you would like to use in a job some day. Number those five starred skills so that number 1 is your favorite, on down to 5.

Recopy those five onto the spaces below.

1.

2.

3.

4.

5.

Brainstorm occupations in which you would use your top skills. For example, the skills of organizing, writing, and analyzing could suggest the occupation "book editor." Then write them both in the space provided below.

Skills **Suggest** **Jobs**

Black Colonial Women

Perhaps the most important difference between the work of Black women and that of White women is that Black women worked in the field, while White women seldom did after the first years of settlement, unless they were on the frontier. We get a picture of Black women working alongside Black men in the field from the plantation diary of George Washington for the years 1787 and 1788:

> "At the Ferry set 3 plows to Work—put the girl Eby to one of them. The Women preparing and hoeing the New ground in front of the House . . . The Women . . . were hoeing the Wet part of the ground between the meadows which the plows could not touch . . . two Men were cutting Trunnels for Fences, and the Women were carrying Rails from the swamp side to the Division fence."

The women who escaped the toil of the fields worked as house servants. Only in the jobs of cook or mammy did the Black woman have the opportunity to supervise others. Though many Black men were able eventually to learn such skills as carpentry or blacksmithing by which they could earn money and hope to support themselves in freedom, almost no Black women, with the exception of the few who could spin, had the chance to learn money-making skills. It is not surprising, then, that fewer women were to be found among runaway slaves.

Excerpted from Women in American History: Women in the Colonial Era and Early American Republic 1607–1820

Activity 5

My Work Values

Individual or Group

Purpose

To help you identify your work values and to relate those values to occupations

Time

2 hours

Materials

"Work Values" handout

Procedure

1. Read a copy of the handout "Work Values."
2. Think about what a value is, and where values come from. Answer the following questions for yourself: What are work values? How do they affect the job decisions we will make, as well as our happiness and satisfaction on the job?
3. Rank the list of values from 1 to 20. If you are working in a group you may want to have some discussion about each value before you rank them.
4. Record your two most important and two least important values.
5. If you are working in a group, tell others in the group what your two most important work values are; ask what occupations would relate to those values.

Work Values

We each have our own set of beliefs about what is important in life; because of the culture in which we grow up, our families, and our own experiences, we each develop our own set of values. This set of values includes how we think about work—do we think of it as a way to make money? Or as a way to contribute to society? Or as a way to do something we feel passionate about? Or all or none of the above?

Rank each work value according to its importance to you. Write "1" on the line in front of the work value you think is most important. Write "2" in front of the one second in importance. Continue until you have ranked all the work values. Twenty values are listed.

Help Society: Contribute to the betterment of the world I live in.

Help Others: Help other people directly, either individually or in small groups.

Public Contact: Have a lot of day-to-day contact with people.

Work with Others: Have close working relationships with a group; work as a team toward common goals.

Friendship: Develop close personal relationships with the people I work with.

Competition: Pit my abilities against those of others. There are clear outcomes.

Make Decisions: Have the power to set policy and determine a course of action.

Work under Pressure: Work in a situation in which deadlines and high-quality work are required.

Power and Authority: Control other people's work activities.

Work Alone: Do things by myself, without much contact with others.

Knowledge: Seek knowledge, truth, and understanding.

Intellectual Status: Be regarded by others as an expert in a particular area.

Artistic Creativity: Do creative work in any of several art forms that might include painting, sculpture, or photography.

Creativity (general): Create new ideas, programs, organizational structures, or anything else that has not been developed by others.

Change and Variety: Have job duties that often change or are done in different settings.

Excitement: Do work that is very exciting or that often is exciting.

Adventure: Do work that requires me to take risks.

Profit, Gain: Expect to earn large amounts of money or other material possessions.

Physical Challenge: Have a job whose physical demands are challenging and rewarding.

Time Freedom: Handle my job according to my own time schedule, no specific working hours required.

Other:

Can you see how a strong valuing of adventure could suggest some occupations while a strong valuing of orderliness could suggest others? Now list your two most important values and your two least important values.

Most Important	**Least Important**
1.	1.
2.	2.

List three careers suggested by your two most important work values.

1.

2.

3.

Early Labor Organization among Women

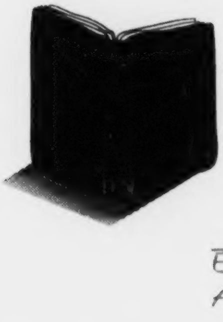
Periodically during the 1820s and 1830s, women in factories and shops rose up in protests against wage cuts, long hours, and speedups. They would stage strikes and marches and form labor organizations that fell apart after a few days. The pattern of wage cut or speedup, meetings and speeches, a strike and a procession through town, a flash of angry militancy and occasional violence, all followed by a steady trickling back to work and the blacklisting of the leaders, was repeated in many factory towns.

The time was not yet ripe for permanent and powerful labor organizations of women and men. However, it was especially difficult to organize women workers because they tended to see their jobs as a temporary occupation before marriage and not as a lifetime commitment. The following lines of a popular mill workers' song undoubtedly express the real desires of most factory women:

No more shall I work in the factory
To grease up my clothes,
No more shall I work in the factory
With splinters in my toes . . .

No more shall I see the super come
All dressed up so fine;
For I know I'll marry a country boy
Before the year is round.

It's pity me, my darling,
It's pity me, I say,
It's pity me, my darling,
And carry me far away.



Excerpted from Women in American History: Women in the Ages of Expansion and Reform 1820–1860

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Activity 6

Making Decisions **Group**

Purpose

To learn how to clearly ask for what you want and what you think is fair without being passive or hostile

Time

3 hours

Materials

"Assertiveness" handout

Procedure

Role-play the given situations so that you have at least one opportunity to play each of these three roles: passive, assertive, and hostile. Process the experience with each other as follows:

1. Ask each participant how they felt in each role
2. Ask about the risks and rewards of each kind of behavior

Assertive Behavior

Have you ever told someone that you didn't mind if they borrowed your textbook for a particular night, even though you actually were planning to use it that night to study for a test and you really did mind?

Or maybe your response to the request was more like, "You've got to be kidding! What a nerve!" or "Where do you get off?" and you later wished you had left it at a simple and direct, "No, I'm using it."

Assertive behavior is when we act in a way that lets others know we expect to be treated fairly and equally.

Passive behavior: submissive, weak behavior

Hostile behavior: overly forceful, negative behavior

Assertive behavior: direct, clear, effective behavior

Assertive behavior helps us take care of our needs while not trampling on the rights of others. We often need to call on assertive behavior to respond to what we perceive as unreasonable demands on us or unfair treatment.

In the case of the textbook scenario, which of the above responses is a passive response? Which is assertive? Which is hostile?

With one or two others, role-play each of these situations. Take turns being the responder, and "try on" at least one passive, one assertive, and one hostile response for each situation.

1. Ms. C. has just asked you to join others who have been serving on a planning committee for a youth dance. The dance is one week away.
2. Another person steps in front of you in the checkout line at the drugstore. What do you say or do?
3. Your older sister wants to borrow your new backpack for a two-week hike. You have never used it.
4. Your boyfriend urges you to use drugs and alcohol.
5. The people for whom you baby-sit ask you today to baby-sit tomorrow night from 6:00 P.M. to 2:00 A.M. Tomorrow night is a school night.
6. Your father insists that you will be a great attorney, just like he is.

You set the scene for additional role-plays.

For which situations would you like to practice assertive behavior?

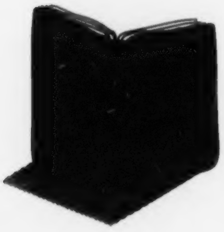
Early Black Feminists

A substantial number of African American women were as eager as White women to achieve women's rights, including suffrage. Sojourner Truth, speaking in 1867 when she was 80, said, "I am glad to see that men are getting their rights, but I want women to get theirs, and while the water is stirring I will step into the pool."

The movements for the abolition of slavery and for the rights of women had been closely linked, yet when the Abolitionists had to get Black suffrage legislation passed after the Civil War, they were unwilling to include the more unpopular issue of female suffrage! Feminists were deeply disappointed and some White feminists and Abolitionists came to a parting of the ways. But most Black women agreed with Frances Harper, a well-known champion of women's rights, when she said, "When it is a question of race (I) let the lesser question of sex go."

This is not to say that Black feminists forsook their belief that the needs of Black women were different and distinct from those of Black men. Women who later became involved in politics and in trade unions spoke against the discrimination leveled against them on the basis of their sex as well as their race.

Excerpted from Sources of Strength: Women and Culture



Activity 7

Goal Setting: Blueprint for Success

Individual or Group

Purpose

To learn the steps and skills involved in goal setting and goal achievement, and also understand what can keep you from reaching your goals

Time

3 hours

Materials

"Goal Setting: Blueprint for Success" handout

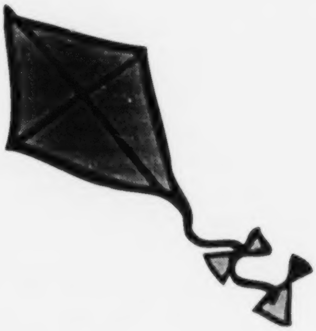
"Goal Setting: Evaluation" handout

Extra paper

Procedure

Complete the handout "Goal Setting: Blueprint for Success." The goal you set should be something you really want to achieve! It can be personal or related to school, family, or jobs, but it should be something you can accomplish in one month.

If you are working individually on the activity ask for feedback from a teacher, counselor, or parent after you have completed the handout, especially for section 5, "Deal with the roadblocks." and section 8 "Look at the possible outcomes."



If you are working in a group, complete the handout and then divide your group into pairs or trios to share and strengthen each other's action plans.

Complete the handout "Goal Setting: Evaluation" after your target date. Then, share the results with your teacher, counselor, parent, or friends.

Goal Setting: Blueprint for Success

Did you want to get a job last summer, but September came and you still had just vague notions of what jobs were available and how to go about getting them? Or did you try to save money toward a new bike, but you never did save any because you couldn't give up going to the movies as often as you liked, and you never did get as many baby-sitting jobs as you thought you would?

These are examples of situations you can find yourself in if you don't set goals for yourself. People often have dreams that aren't realized because they overlook the importance of setting clear goals and identifying the steps it takes to reach those goals.

What goals do you have for yourself right now? (These goals can be personal or related to family, school, or jobs.) Pick one you could reasonably accomplish in a month, and then follow the blueprint below for achieving your goal.

1. Choose a goal. Write it down. *I'm going to (do what)*

by (when)

2. Ask yourself

   Is it realistic for me to do this?

   Do I have the time, ability, and whatever else I need to do it?

   Is it worthwhile?

   Is it important enough to me that I'll work to do it?

3. If necessary, change the goal to make it realistic and worthwhile. **Final goal:**

4. Break the goal down into smaller parts, and remind yourself of the goal.

   - On a sheet of paper, list the steps, and put them in order.
   - Write down a deadline for completing each step.
   - Post the piece of paper where you will see it every day, and check off the steps as you accomplish each one.

5. Deal with the roadblocks. Ask yourself

What could keep me from reaching my goal?

I'm afraid I might fail.
I don't have the time to do it.
I don't have the ability or knowledge to do it.
I'm afraid of what others might think.
I'm afraid I might succeed.

6. What can I do to overcome the roadblocks and reach my goal?

7. Who can help me?

Name **Kind of Help**

8. Look at the possible outcomes.

What good things might happen if I reach my goal?

What bad things might happen if I reach my goal?

What can I do to minimize the bad things?

Close your eyes and imagine that your goal is accomplished. Describe yourself. What are you saying, thinking, feeling? Describe the scene:

The best thing about accomplishing this goal is

Goal Setting: Evaluation

Soon after your target date take a few minutes to see how your blueprint worked.

1. My goal was to do

by

2. I accomplished these steps:

3. I accomplished my goal (circle one and describe what you did):

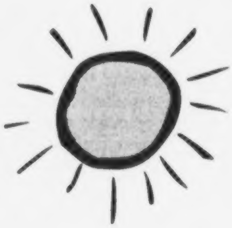
yes no partially

4. These things helped me:

5. I learned this about myself:

I also learned:

6. If I were to do it again, I would do these things differently:



Black Education and Vocational Education

Black teachers faced schools segregated by race as well as by sex. In the aftermath of the Civil War, they also faced the problem of creating schools for the freed slaves who, having been denied education, were now enthusiastic about making up for lost time. Even Whites who accepted the end of slavery still insisted that Blacks should remain a separate caste, continuing to do servile tasks. These Whites were hostile to the expenditure of public money for schooling Blacks, whether children or adults. The resistance was only partly due to miserliness; much of it was based on the prediction that well-educated Black people would step out of their "place" and compete with Whites more effectively for jobs and social position. There was little interest in the South in developing high-quality education for Black children.

For a few years after the Civil War, the federal government attempted to provide serious schooling for freed slaves. Northern philanthropic agencies recruited and paid the teachers; the Bureau of Refugees, Freedmen, and Abandoned Lands established schools and assisted the volunteers in recruiting pupils and supplying them with books.

More than 9,000 teachers, over half of them women, taught in schools for freed slaves in the South during Reconstruction. All the teachers—male and female, White and Black—were faced with ostracism and violence from Southerners who saw the schools as—what they indeed were—a sign that the condition of Blacks was going to be different in the postwar world.

Excerpted from *The Impact of Women on American Education*

Activity 8

Putting It All Together

Individual or Group

Purpose

To help you clarify your thinking about your interests, skills, and talents

Time

3 hours

Materials

"Putting It All Together" handout

Newspaper

Procedure

If you are working on your own, share your results with an adult you trust and who is willing to give you feedback on what you have discovered. That can be a parent, teacher, counselor, or a friend. If you are working in a group, share the results with other members of the group and take the time to give each other feedback on what you have learned. You can do this in a full group discussion or you can pair off and take 10 minutes to give each other feedback.

Putting It All Together

Below is a list of some talents and skills. Use the list as a starting point for thinking about your special talents and skills. If you don't see them on this list, add to the list (You can refer back to the earlier activities for ideas):

Speaking before Groups
Working with People
Making Decisions
Using Computers
Leading Groups
Playing Sports/Games
Planning
Painting or Drawing
Collecting Things
Putting Puzzles Together
Figuring Out Problems
Writing Stories or Poems
Caring for Animals
Asking Questions
Growing Plants
Making Things
Dancing
Fixing Things
Helping People
Making Music

What are your talents and skills?

1.

2.

3.

4.

5.

What are your hobbies?

1.

2.

3.

4.

What are your favorite subjects in school?

1.

2.

3.

4.

Think about the life-style you want. You may find it helpful to read the Obituary section of your local paper. In it you will read about all different people's life-styles—their jobs and careers, volunteer and community work, families, friends, hobbies, and interests.

Describe the type of life you would like to be leading when you're twenty-five years old.

Education:

Friends:

Hobbies:

Travel:

Sports:

Fitness:

Look at all the choices—as many as you can find! There are many exciting careers you may not be aware of. Talk to your teachers, parents, or a guidance counselor, and look at books about careers.

Think about the types of jobs people around you have, and visit businesses, colleges, hospitals, and other places in your community to find out about careers.

List four interesting occupations you have discovered.

1.
2.
3.
4.

Get as much information about careers as you can. A good reference book that your school library or public library should have is the *Occupational Outlook Handbook,* published by the U.S. Department of Labor. This book provides information about 200 occupations. It describes the type of work, employers, training needed, salaries, and related occupations.

After looking at the *Occupational Outlook Handbook* or other books about careers, write down three interesting occupations and their annual salaries. To find out more about these careers, you can read biographies and interview people who are working in these fields.

1.
2.
3.

There are several ways in which people prepare for their careers. For some careers, you must enroll in college. For others you need to attend a specialized school or become an apprentice. Some people participate in on-the-job training programs.

For three occupations, write down the training or education programs needed. Talk with your guidance counselor to find out which courses you would need to take in high school.

1.

2.

3.

Learn about scholarship and financial aid programs. There are many programs available for students who need money to pay for college and other educational programs. Talk to your guidance counselor, teacher, or librarian.

List the names of three scholarship or financial aid programs available in your city.

1.

2.

3.

Make a list of new activities you would like to participate in. Plan to do new things like joining a club, competing in a science fair, visiting a museum you've never been to, taking up a sport, or performing in a play. Keep track of your progress. Use a notebook to record your activities and accomplishments. Organize it in the following way:

Name of Activity

Organization

Description of Activity

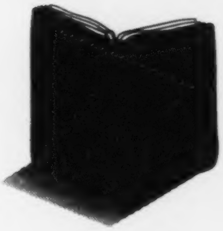
Award Received

Office Held (president, member, etc.)

Women Organize

In 1900 women workers accounted for 20 percent of the labor force. Yet few were organized into unions, and their wages were half of those earned by men. As more and more women entered the work force, their participation and importance in union struggles increased. Working women, in particular immigrant women, participated in and led many strikes, especially in the industries with the highest concentration of female workers. The garment industry, considered a "female" trade, witnessed some of the most violent struggles. The early locals of what is presently the International Ladies Garment Workers Union date back to this period.

Excerpted from In Search of Our Past: U.S. History Teacher Guide



Reflection

Now that you have completed one or more of the exercises in the section Discovering Interests, Skills, and Values, jot down some of your thoughts about what you have learned from the activities and the readings.

The most important thing I found out about myself was . . .

The most interesting activity was . . .

because . . .

The most interesting reading was . . .

because . . .

Has what you have learned changed what you want to do in the future?

How?

Stereotyping: "Do I Have to?"

Stereotypes abound in our society. They exist in all of us and in every major area of our lives. The following activities have been designed to make you more aware of how being a female influences your entire life, including the kinds of classes you decide to take, the kinds of chores you do at home, the way teachers and other adults treat you, the way your peers treat you, and, also, your ability to find a job.

Stereotyping means making generalizations about people based on commonly held beliefs rather than on actual individual characteristics. What does gender-role stereotyping mean? We are using gender stereotypes when we believe that boys are "supposed to be aggressive" or girls are "supposed to be quiet." It means that, as females, we are treated differently than males, and some of those expectations and biases could limit your career hopes. But they don't need to. The more you are aware of how gender stereotypes affect you overall as a female, the more you can work to overcome those barriers.

It is difficult for anyone to make life-style decisions based only on personal preference because we all have been bombarded from birth by other people's

opinions of good or bad life-styles. For example, caring for others is often emphasized as an important "feminine" quality. When "feminine" qualities differ from your view of what you would like to do for work, you may find it tough to choose a life-style based on your personal needs and wishes.

Whether your career choice is like that of many other women or is unique, the personal satisfaction of creating a life-style for yourself is a basic right.

This section is designed to encourage and simplify your process for making a personal choice.

Activity 9

Cinderella's Only a Fairy Tale

Individual or Group

> *. . . redefine fairy tales so that Sleeping Beauty can stay awake and look at her life with her eyes wide open, and the brave prince can relax and enjoy his life without continually having to prove his "manhood."*
>
> *—Letty Cottin Pogrebin, Free to Be . . . You and Me*

Purpose

To recognize sources of gender-role stereotypes in fairy tales

Time

1–2 hours

Materials

Stories or videotapes of fairy tales, such as *Cinderella, Sleeping Beauty, Rapunzel, Snow White, Little Red Riding Hood, The Little Mermaid*

"Fairy Tales" handout

Procedure

1. Choose a fairy tale that you suspect has gender-role stereotyping.
2. Read the story or watch a videotape of the fairy tale. Then note, on paper if you are doing the activity individually, or on the board if you are doing the activity as part of a group, each example of gender-role stereotyping, gender bias, or gender discrimination that you find.
3. If you are working in a group, discuss the questions with the other members of the group. If you are working by yourself, first answer the questions yourself, then discuss them with a teacher, counselor, or another adult whose feedback you value.

Fairy Tales

Once you have reviewed the story, analyze it for gender-role stereotypes by answering the following questions:

1. What did statements, situations, or actions imply that discriminated against one gender more than the other?
2. What did the story tell girls and boys that they should be or ought to be?
3. What forms of discrimination did you notice?
4. How do you feel about the hidden discriminators?
5. How did these stories influence you to think about gender roles?
6. What would the story be like if it were free of gender bias?
7. How would you change the story to make it free of gender bias?
8. How could you change the story to tell young children what they can be rather than what they should be?

Matrilineal Societies

Traditionally most American Indian tribes had very few negative gender biases concerning men and women; both genders were valued equally. During tribal days, survival of the tribe and the individual depended upon strong interdependence between males and females. Each had very definite responsibilities to fulfill, and those assumed by men were not considered more important than those assumed by women. Both were considered equal.

Many American Indian tribes were matrilineal societies. Matrilineal means that people trace their bloodline through their mother, grandmother, great-grandmother, etc. Membership within the clan and citizenship in the tribe were traced through the female line. For example, all children belonged to the mother's clan and tribe and not to the father's.

In these societies daughters were important because it was through them that the family line was to continue. Inheritance of property was also carried out through the female line. In some matrilineal societies where women owned the land used for farming, it was the daughters who inherited the land, rather than the sons.

Excerpted from In Search of Our Past: U.S. History Teacher Guide

Activity 10

Who Does What Where? Individual or Group

Purpose

To learn that career and job choices are part of a changing spectrum and part of a lifelong process of individual growth

Time

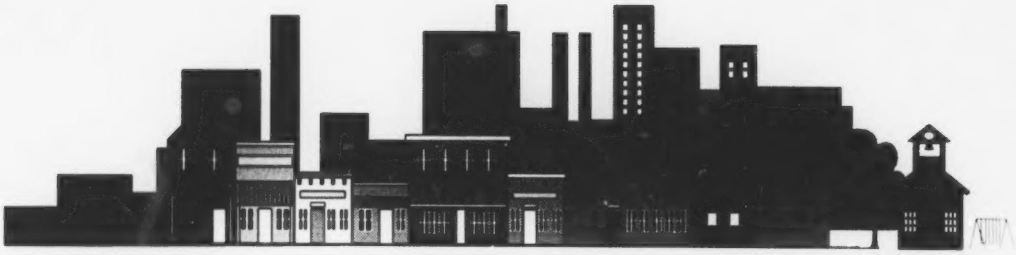
45 minutes

Materials

"Who Does What Where?" handout

Procedure

Whether doing the activity by yourself or within a group, simply fill out the handout and share your responses either within the group or with a teacher or another adult.



Who Does What Where?

To get a rough idea of how extensive gender-role stereotyping is, jot down your answers to the following questions.

In Your School

1. Girls usually take these kinds of classes:
2. Boys usually take these kinds of classes:
3. Male teachers usually teach these kinds of classes or subjects:
4. Female teachers usually teach these kinds of classes or subjects:
5. In yearbook, club, or other group photos, who is usually smiling and who is usually serious—males or females?
6. In school contests and elections, what offices, roles, or positions do males and females usually hold?
7. What sports are offered to females? Who usually coaches the team?
8. Is the same amount of money spent on physical education and sports for both males and females (you can ask your physical education coaches or teachers this question)?
9. Do girls team coaches get paid more than boys team coaches?
10. In the fiction you read for your English class is the main character usually male or female?
11. Do textbooks in your school usually discuss the achievements and outcomes of women, men, or a balance of both?

In Your Home

1. With regard to the following tasks, check (✔) who does what.

	Females	Males
Bill paying		
Car maintenance		
Child care		
Cleaning		
Coaching		
Community Work		
Cooking		
Driving		
Gift buying		
House repairs/maintenance		
Laundry		
Making dentist/doctor appointments		
Parent-Teacher Conferences		
Shopping		
Teacher's Aide		
Yard work		

2. Do your parents work outside the home?

3. What are the hobbies or interests of the females in your home?

4. What are the hobbies or interests of the males in your home?

In Religious Institutions

Who usually holds these positions? Check (✔) who does what.

	Females	Males
Minister/preacher/rabbi/priest		
Council/vestry (the governing body)		
Choir director		
Organist		
Religion class teachers		
Membership committee		
Fund raising/special projects		

In the Work World

1. What jobs are usually held by women?

2. What jobs are usually held by men?

3. How many jobs can you name that have a balance of men and women employed in them?

Success Story: Wilma Mankiller (1945–)

Wilma Mankiller is the only female ever to be elected principal chief of the Cherokees. The life of this Cherokee woman who grew up under poor circumstances in two different worlds—first in Adair County, Oklahoma, and later in San Francisco—is an example for all young people to follow, regardless of their gender, their race, or their financial circumstances. Throughout her life, Chief Mankiller has shown time and again a strength of character that she credits to her rural Cherokee upbringing.

When she was growing up, she did not consider herself different from other people. Although her family did not have a lot of money, this did not bother Wilma because most of the people around her lived the same way. But when they moved to San Francisco, the differences between people who had money and people who were poor, like her family, became really clear. She realized that one of the ways of not being poor was through education. Her decision to go to college, even though she was married and had children, makes her life different from many other people.

Mankiller worked to convince people in the Cherokee community that they could improve their lives and she found what she had known all along—that her people, even though poor, were willing to share what they had with one another, and that the Cherokee spirit of cooperation, self-reliance, and respect for the environment were a valuable cultural heritage they could share with all of us.

Excerpted from A-Gay-Yah: A Gender Equity Curriculum for Grades 6–12

Activity 11

Who Does What at Home? Group

Purpose

In this role-play activity you will become more aware of how personal gender-role expectations can affect your life-style. It can be very difficult to assume roles and do tasks differently from the way we have learned to do them in our family home. At the end of this exercise you will have the opportunity to discuss the way your family splits up the tasks at home, and how you might do things differently.

Time

1–2 hours

Materials

"Who Does What at Home?" handout

Chalkboard and chalk

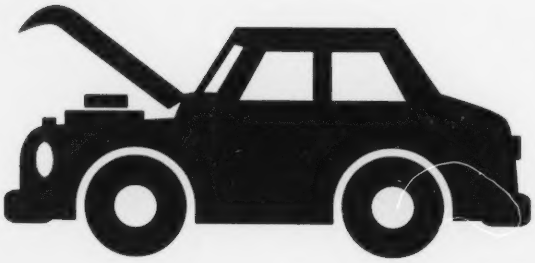
Procedure

After reading a description of the situation you will role-play that situation to determine how various household tasks should be divided, assigned, and arranged.

1. Copy the list of tasks, from the role-play onto the chalkboard.
2. Divide your group into units of eight to twelve girls (or less depending on how many girls you have in the full group) each and hand out a copy of the role-play to each group. Have each group select a leader for discussion of the role-play within the group; group members then decide how they will approach the situation, who will play the roles (the actors), how they will play the roles, and how the actors will assign each household task.
3. Each group can take turns performing the role-play, while the rest of the group watches. As each group role-plays the situation, use the list on the chalkboard to keep track of which tasks are assigned to female family

member(s), which to male family member(s) and which to the family as a family project. Also keep track of which tasks are seen as traditional and which as nontraditional (you may use symbols such as F for female, M for male, FAM for family, T for traditional, and NT for nontraditional).

4. After each group has had the opportunity to interpret the situation, start a discussion, using the list of tasks you have written on the chalkboard. Cover the following points:
   - How did each group decide to interpret the situation?
   - How did each group approach the tasks in the situation? For example who made the final decision? The female or the male? Were the tasks assigned based on gender-role expectations and gender-role stereotyping?
   - How does gender-role stereotyping of family roles affect career choices and decisions?



Who Does What at Home?

1. If you were married, had two children, aged three and six, and you and your spouse were both employed, how would you divide the household tasks listed here? (You may add other tasks to the list and discuss why the tasks were added.)

Tasks	**Adult Female**	**Adult Male**	**Child Male**	**Child Female**
Cook meals				
Do laundry				
Plan recreation				
Cleaning				
Do yard work				
Bathe children				
Balance checkbook and pay bills				
Do grocery shopping				
Clean bathrooms				
Put out trash				
Wash car				
Arrange child care during the day				
Figure income taxes				
Make major purchases (house, car, appliances, etc.)				
Other:				

2. Discuss, within the entire group, how these tasks are handled now in your home. What would you do differently?

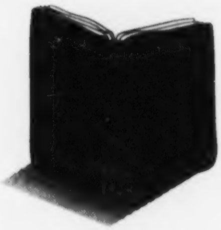
Success Story: Dr. Elizabeth Blackwell (1821–1910)

A large part of success is perseverance—working steadily toward a goal that you believe in. Elizabeth Blackwell lived from 1821 to 1910, and she achieved great success in the field of medicine. She was the first woman in the United States to qualify as a doctor.

When she was a young woman in 1842, Blackwell worked as the headmistress of a school—one of the few occupations a woman could pursue at that time. But she realized that working in medicine was what she really wanted to do. Blackwell applied to many medical schools in New York City and Philadelphia, but they all turned her down because she was female. Finally, a medical school in Geneva, New York, admitted her, and in 1849 she was awarded her medical degree. The following year she got an eye infection that caused her to lose the use of one eye, but she didn't give up.

Eventually, with the aid of two other women who followed her lead and became doctors, Blackwell opened a dispensary and medical college for women in New York, followed by a hospital to serve women. Elizabeth Blackwell had to overcome opposition to all of these projects.

Excerpted from Going Places: An Enrichment Program to Empower Students



Activity 12

Goal Digging

Individual or Group

Purpose

Lots of factors can influence your career decisions. The factors may be internal as well as external, and sometimes they become barriers that prevent you from attaining your goals. This activity can help you identify your strengths and weaknesses, and discuss your decisions with others.

Time

45 minutes

Materials

"Goal Digging" handout

Procedure

What about your goals? What would other people say about them? List your goals and, using a scale of 1 to 5 (1 being most important and 5 being least important), rank them in order of importance to you.

When you have finished ranking your goals, find out what other people would say about them. Select two friends and a member of your family to help you complete this activity. Read your goals to them (do not first let them see your own rankings) and ask them to rank the goals in order of importance. Then fill in the ranking chart provided. If they rank them differently than you did, ask them why.

Below are some common barriers that can prevent you from attaining your goals.

Some internal barriers (personal drawbacks) are poor aptitudes or ability, lack of physical strength, abrasive personality, prejudices, lack of knowledge. External barriers (obstacles outside self) are discrimination, educational opportunities, financial needs, educational background, family responsibilities, society's attitudes.

Goal Digging

What do you do well? List your strengths. Be fair to yourself and list those things you do well.

1.
2.
3.
4.
5.
6.

What do you do poorly? List your personal shortcomings or things you do poorly.

1.
2.
3.

Think in terms of what you enjoy doing and what's important to you, and complete the following two statements. These will be your short- and long-term goals.

What I Want to Do Next Year:

What I Want to Do in Seven Years:

My Top Five Goals

Now, rank the above short- and long-term goals in the order of the most important to you first, and the least important to you last.

1.

2.

3.

4.

5.

But What Will Others Say?

When a young woman said she was going to follow her brothers into the coal mines, her family and friends tried to talk her out of it. Likewise, when a young man announced he wanted to be a kindergarten teacher, his friends reacted negatively.

Situations like these do happen. What about your goals? What would other people say about them? In the space below, list your five goals in the order of most important first.

Next, find out what other people would say about them. Select two friends and a member of your family to complete this activity. Read your goals to them (do not first let them see your own rankings) and ask them to rank the goals in order of importance.

Goals		Friend	Friend	Family
	1.			
	2.			
	3.			
	4.			
	5.			

Success Story: Shirley Chisholm (1924–)

Sometimes it's hard to take the first few steps on the road to success, but once you're past the first hurdle, you're off and running. That's the way it was for Shirley Chisholm, the first African American woman elected to Congress. When Chisholm was applying for her first job as a worker in a day care center, the supervisor was reluctant to hire her because of her youth and small stature. But Chisholm convinced the woman to try her out. She has been working hard and achieving successfully ever since in successive careers as a school teacher, director of a day care center, and congressional representative.

In her political work Chisholm strives for racial and sexual equality. Her achievements include protecting domestic workers with legislation pertaining to the minimum-wage law, environmental health, day care, food stamps, health care, full employment, and human rights.

In 1972, Congressional Representative Chisholm made a bid for the Democratic nomination for president, receiving 154 delegate votes.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 13

Where Do I Stand?

Group

Purpose

Many of an individual's gender-role expectations may be traditional or stereotyped. This activity will help you become more aware of how gender-role expectations, whether biased or nonbiased, affect personal career decisions and choices. It will also help you become aware of your own gender-role expectations that cause you to respond as you do.

Time

45 minutes

Materials

Two large sheets of paper

Masking tape

Chalkboard and chalk

Procedure

Respond to the following series of statements by agreeing or disagreeing on the importance of each value judgment and personal expectation.

Prepare for the session by labeling one large sheet of paper "Agree" and the other "Disagree." Then tape the sheets in a prominent place, one on either side of the room.

Choose a reader out of the group—that person will be reading a series of statements to the group, who should all gather in the center of the room, which can be considered "Neutral" territory. As the reader finishes reading a statement, each person in the group should decide whether she agrees or disagrees with it and walk to the sign that matches that opinion.

If you do not want to move about, you can use the following method of conducting the activity. Make three columns on the chalkboard: "Agree," "Disagree," "Neutral." After the reader reads each statement, ask for a show of hands for each category, and tabulate the results on the board.

You will be giving your opinions; there are no right or wrong answers. If you don't have an opinion one way or the other about a particular statement, you should remain in the center of the room, in the "Neutral" territory. Finally, keep in mind that you may choose not to play the game if at any point you feel negative about the activity. And you may choose to not play in order to respect the privacy of your feelings.

Depending on the size of the group, proceed in one of the following ways at the conclusion of each statement:

1. Allow each to state the reasons for her opinion on the statement.
2. Appoint a group spokesperson for each side, that is, those who agree and those who disagree. Have each side meet as a whole, and then let the spokesperson summarize the feelings of that group to the other group.

Statements to be read by the reader:

1. Teresa's first series of job interviews resulted in an offer to go to work in another city—an offer that Teresa turned down for a less desirable position in the same city as her husband's job. Was this a wise decision?
2. Teresa was informed by her new employer that the primary reason she was hired is that she is a woman—that several of the male applicants for her position had more experience than she. Do you think it was fair for the employer to hire Teresa?
3. Teresa is angry that all the male engineers, new and old, have been assigned their own new company cars, whereas the three female engineers have been told to use one of two older company cars when they are calling on clients. Is this fair?
4. All the male engineers have private offices, whereas the three female engineers have to share a large office. Is this fair?
5. Teresa has discovered that the three female engineers are the lowest paid of all the engineers now employed by the firm. However, the three female engineers are also the three most recently hired by the company. Is this fair?

6. Teresa's husband, Juan, is angry that he was not chosen by his company for a new vice-presidency position. This promotion would have enabled Juan to make a salary more than Teresa's. He is currently making less than Teresa. Should a husband earn more than his wife?
7. The vice-president's position was given to a much less experienced manager than Juan, and word is that the only reason the vice-presidency was given to her was that the company was being pressured to hire a woman. Is this fair?
8. Because of being passed over for promotion, Juan has decided to resign from his position and take a lower-paying job at another firm in a different city. He tells Teresa to quit her job and get ready to move. Teresa quits. Did she make a wise decision?

To conclude the activity, discuss—and list on the chalkboard—the types of gender-role expectations that influenced your opinions. (Note: You will probably want to keep a rather tight rein on the discussion this activity generates, as it can easily get out of hand.)

Follow-Up/Variations

1. Break into small groups and create your own situations for discussion.
2. Pair off with members of the opposition and discuss their differences of opinion on each statement.

Success Story: Harilyn Rousso (1946–)

Harilyn Rousso is the director of Disabilities Unlimited Counseling and Consultative Services and a psychotherapist in private practice in New York City. She is the founder and former director of the Networking Project for Disabled Women and Girls of the YWCA of the City of New York. A social worker, educator, and disability rights activist who has cerebral palsy, she writes and lectures widely on women with disabilities, sexuality and disability, and the psychology of disability. This is what Rousso has to say about how she chose her career:

"Myths about women with disabilities influenced my decision to become a psychiatric social worker and psychotherapist. Our culture tends to define female sexuality and womanhood in terms of physical perfection and beauty. We are perceived as more 'womanly' the closer we come to meeting Madison Avenue or Hollywood standards of beauty.

As a young girl with a disability I felt quite far removed from those standards, and as a result I did not feel very confident about myself as a woman. When I was in college, I majored in economics, but after college, I switched to social work. I made that decision for many reasons, but an important one was my desire to identify and be identified with a 'woman's profession.' I did not yet recognize that having a disability is quite compatible with being female, and that defining womanhood in terms of physical perfection is both narrow and narrow-minded."

Excerpted from Disabled, Female, and Proud! Stories of Ten Women with Disabilities, by Harilyn Rousso, Exceptional Parent Press, Boston, 1985

Activity 14

Paper Dolls

Individual or Group

Purpose

To create awareness of everyday examples of gender-role stereotyping

Time

1-2 hours

Materials

Old magazines and newspapers

Large roll of paper or posterboard

Glue

Procedure

Scan through old magazines to find pictures that demonstrate your ideas concerning characteristics and expectations for males and for females. Cut out cartoons, pictures, advertisements, headlines, and titles that represent gender-role stereotyping. On one wall of the room stretch out some paper and label it WOMAN. Do the same on another wall and label it MAN.

Paste your cartoons, pictures, advertisements, headlines, and titles on the appropriate mural, creating a collage for WOMAN and one for MAN that demonstrate gender-role stereotyping. Look also for pictures that show both females and males together, or entire families.

Look at the qualities and expectations suggested in the collages for men and women. If you are doing this activity alone, answer the questions that follow. If you are in a group, discuss what you see. List on the chalkboard or mural what qualities and expectations are shown or implied. On the list, note which qualities you view as positive and why?

What qualities seem negative?

Why?

Are you in agreement with the magazine portrayals?

How do you believe these differences came to be?

How different would less stereotyped collages of WOMAN and of MAN look?

Follow-Up/Variations

Try a nonstereotyped collage. Do one for WOMAN and one for MAN.

Are the collages more alike or more different from one another?

What would be a better title for the nonstereotyped collages than WOMAN and MAN?

Compile a list of stereotyping themes found in magazines, advertisements, and newspapers.

Examples:
Women should be sexy.

Men should be macho.

Look for examples of these same themes in TV shows, words to popular music, movies, and cartoons.

Look for examples that do not promote these stereotypes.

Examples:
Men can be good parents.

Women can be very successful in business.

Success Story: Clara Shortridge Foltz (1849–1934)

Success comes most often to those who assertively pursue what they believe in. That's what Clara Shortridge Foltz did, and she became the first woman to practice law in the state of California.

Foltz was born in 1849. During that time, lawyers didn't graduate from law school like they do today. Instead they "read law" in the office of a practicing attorney until they knew enough to pass the state bar examination.

Foltz knew she wanted to be a lawyer, but she also knew that California law said that the practice of law was restricted to "any white male if he was of the right age, moral character, and had knowledge of the law."

This didn't stop Foltz. She rewrote the law statute, making it gender neutral, by crossing out the word "male." And she began her fight before the state's male-controlled legislature to get her rewritten bill passed and the law changed. Foltz met many men who believed that women belonged in the home, yet she repeatedly argued assertively in defense of her bill. Eventually, the bill narrowly passed, but that wasn't the end. Foltz still had to use her assertive skills to make sure the governor didn't veto the bill.

Finally, in 1878, Clara Shortridge Foltz became the first woman in California licensed to practice law.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 15

Line Up: A Human Bar Graph

Group

Purpose

To examine common gender biased statements (personal attitude check)

Time

45 minutes

Materials

Markers

Tape

Long roll of paper (alternative: long piece of rope)

Procedure

Refer to the following list of gender-role stereotypes about girls and boys. Draw a continuum across the front of the room—use a full-length chalkboard, tie a long piece of rope to two chairs placed on opposite sides of the room, or stretch and tape paper rolled across the front of the room above the chalkboard. Write in the statements of agreement or disagreement (or use signs). The continuum should look like this:

Agree **Neutral** **Disagree**

1. Choose someone in the group to read the stereotypes.
2. Next, ask everyone to stand in front of the neutral sign.
3. The reader will read the first stereotype, and each member of the group will then move, without comment, to stand under the "Agree," "Neutral" or "Disagree" sign. After all have chosen their stand, each person can share their reasons for the position they have taken. Remember: There are no rights and wrongs, only opinions.

4. After hearing a few of the rationales, some people may wish to change their mind and shift to another line. Ask them to explain the change. They can choose to pass or not answer by saying "I pass."
5. When the reader is ready to read the next stereotype, have all the members of the group return to "Neutral". Continue through several stereotypes.

Gender-Role Stereotypes

It is not okay for boys to cry.

Girls shouldn't be allowed to play on boys' teams.

It is not okay for boys to play with dolls if they want to.

It is not okay for girls to play with trucks if they want to.

Boys get into more trouble than girls.

Girls are better readers than boys.

Boys are better at math than girls.

Teachers punish boys more often than girls.

A girl could never grow up to be president of the United States.

Boys are troublemakers; girls are well behaved.

Girls do neat work; boys do sloppy work.

Boys are good at math and science.

Girls are good at reading and spelling.

Boys are better at science than girls.

Boys are better at physical education.

Girls get better grades than boys.

Boys don't like school; girls like school.

Boys are better at using computers than girls are.

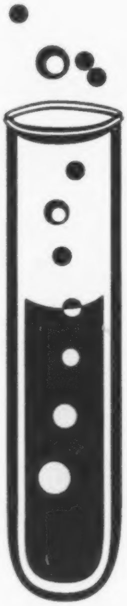
Success Story: Dr. Margaret Ackerman

Dr. Margaret Ackerman is a chemist who analyzes substances in the air we breath and the water we drink, and she thinks her work makes a difference, "I care about clean air and clean water. My work can help solve some of our environmental problems."

When she was a young girl, Ackerman thought she might be a medical doctor, but, later in college, an undergraduate chemistry professor offered an opportunity to do research and encouraged her to continue in chemistry. Ackerman's inclinations for science were very strong by the time she began high school.

She attributes this to her aunt, a math teacher, a remarkable woman who was a strong influence on her and provided a role model. This aunt, who raised her after her mother died, encouraged Ackerman's interest in science and taught her to value her freedom to be anything she wanted to be.

Excerpted from How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science



Activity 16

Shocking Debate

Group

Purpose

You have been exploring some of the barriers you will face as a young woman making career choices. This exercise will help you explore and discuss some of the barriers young women with disabilities face as they, or you if you are a young woman with a disability, may face as you begin your career exploration.

Time

45 minutes

Materials

"Could Kathy Become an Electrician?" handout, which includes discussion questions and discussion guidelines

Procedure

Begin by dividing your group in half. One will argue in favor of Kathy becoming an electrician, the other will argue against this choice. Next, read the handout and the discussion questions and guidelines that follow. Each group can then take ten minutes to prepare their position. Then, begin to debate using the following debate guidelines:

1. Each side will take five minutes to present their point of view, without interruption.
2. Acknowledge that you may be arguing positions you don't personally agree with, but like good lawyers, you should do your best to develop convincing arguments and to get into the spirit of a lively, competitive exchange.

Allow the debate to develop for ten to fifteen minutes; then spend the following fifteen minutes back in the full group discussing the experience, using the discussion questions as a starting point for the discussion.

Could Kathy Become an Electrician?

Kathy is an eighteen-year-old woman who has cerebral palsy. Her disability has caused weakness in her legs, so she walks with crutches; she has excellent manual dexterity. A senior in high school, Kathy has maintained a C average. She announces to her teen club leader that she's always wanted to be an electrician, like her uncle. Both her guidance counselor and parents think this is a terrible idea and want her to pursue clerical training. Her uncle agrees, pointing out that racism in the trades had limited his own advancement. Kathy is confused and doesn't know how to proceed.

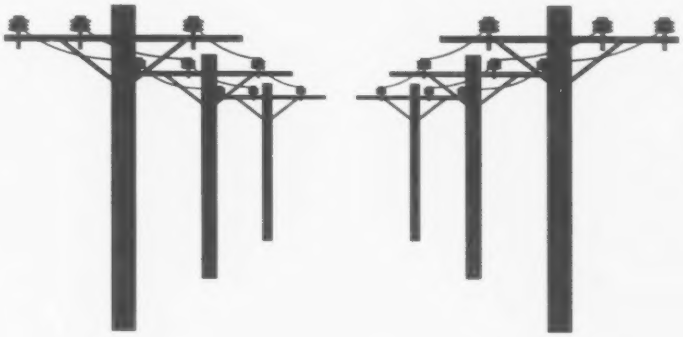
Discussion Questions

1. How do you feel arguing your side's position?
2. How would you advise the teen group leader to respond to Kathy's dilemma?
3. Would you respond differently if Kathy were a man? If she were not disabled?
4. How do you think the fact that Kathy is Black might influence the advice she receives or her acceptance in a nontraditional job like this?

Discussion Guidelines

1. You do not need formal knowledge of an electrician's job to develop a point of view.
2. Women with a wide range of disabilities have careers in many different fields. Some examples include the following:
   - a stockbroker who is blind
   - a sculptor who is quadriplegic
   - a neurochemist who is deaf
   - a newspaper reporter who walks on crutches
   - a teacher who uses a wheelchair

   These women have used a range of adaptation and special devices at the workplace to accommodate to their special physical needs.
3. Most women with disabilities who work have faced discrimination. They have developed activist strategies to overcome it, from educating their supervisors to filing formal complaints.



Reflection

Now that you have completed one or more of the exercises in the section Stereotyping: "Do I Have to?" jot down some of your thoughts about what you have learned from the activities and the readings.

The most important thing I found out about myself was . . .

The most interesting activity was . . .

because . . .

The most interesting reading was . . .

because . . .

Has what you have learned changed what you want to do in the future?

How?

Exploring Careers

How high the sky? How far the moon? These are questions asked by many people. But how many people actually go on to find the answers? And of those who do, how many are girls? Actually, the answers to the first two questions may not be important. What is important is the curiosity and the willingness to explore!

Science and math especially suffer from a mystique that cause girls and boys to think they are only for the brilliant, or for nerds who like to spend all their time studying. This is especially true for girls—there are many fewer females in math- and science-related careers than there are males.

Science and math are for everyone—they are a part of our everyday way of life. Adding to our scientific knowledge can, for any of us, add to our enjoyment of living and our knowledge of life. They are natural—there is nothing mysterious about science or math.

Don't close your mind to the possibility of a science- or math-related career. The following activities will give you some information about the kinds of jobs you can do that require some knowledge of science and math, and they will give you a taste of how interesting and fun math and science careers can be.

Activity 17

Construx

Group

Purpose

This activity will help you discover how geometric designs add strength to structures. You will learn different scientific processes: communication, control of variables, experimentation, measurement, and use of spatial relationship.

Time

45 minutes

Materials (for each team)

"Building Your Bridge" handout

20 straws

100 Lego® blocks

24 inches of transparent tape

Scissors

Ruler

Weights (blocks, ceramic tiles, or marbles)

Weighing pan (sardine-size can)

Procedure

Before beginning the activity, read through the information on bridges. Then proceed through steps 1, 2, and 3. Each team will design, construct, and test a bridge for maximum strength!

Follow-up/Variations

- Look for geometric designs used as supports in buildings.
- Construct other bridge designs from photographs or pictures.
- Construct a small bridge as a community or school project.

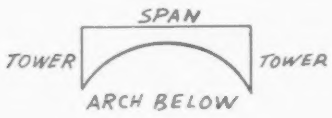
Thanks to Jim Henley for sending in this activity

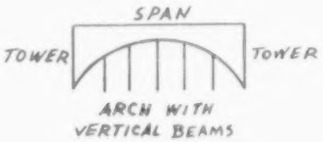
Building Your Bridge

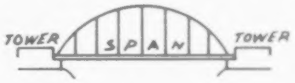
Since you are building your bridges for maximum strength, you need to know that loads are outside forces acting on the bridge. One force is the weight of the span due to the pull of gravity. A long span doesn't make a very good bridge. It can sag from its own weight. Another force adding weights to the span increases the load, causing further sagging.

You need to decide how much sagging will be permitted (maximum load) when you do this activity. This can be defined in a variety of ways. For example, maximum load is achieved when the span first bends. Another example could be when the span touches the table.

Several factors help increase the strength of the bridge span. Some of these are design, length, and materials used in the span and the towers. Various geometric designs are used to add strength when constructing bridge structures. One geometric design used is the arch. Arches are used above or below the span, by themselves or in combination with vertical beams.

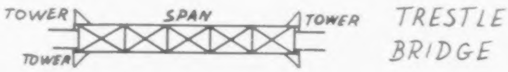

SPAN
TOWER
TOWER
ARCH BELOW


SPAN
TOWER
TOWER
ARCH WITH
VERTICAL BEAMS

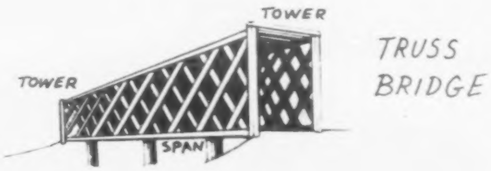

TOWER
S P A N
TOWER

Another geometric design is the triangle arch above. Triangles are used to strengthen trestle bridges and truss bridges.

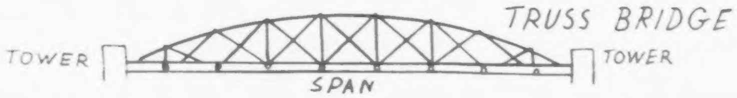
Trestle bridges are made with concrete beams that form crisscrosses.


TOWER
SPAN
TOWER
TOWER
TRESTLE
BRIDGE

Truss bridges are made from metal cables that crisscross above the span (like the old covered bridge),


TOWER
TOWER
SPAN
TRUSS
BRIDGE

or above the span with an arch.



Begin by reviewing the following rules:

Bridges should be designed for maximum strength.

Each bridge will be tested for strength by placing weights on the center of the span.

The only restriction to the bridge design is that the span must be at least ten inches long and self-supporting.

Girls have thirty-five minutes to complete this design.

1. Each team will plan the design of the bridge.
   - Teams draw a picture of the design.
   - They write reasons for creating this design.
2. Teams construct their bridge.
3. Teams test the strength of the bridge by doing the following:
   - Place the weighing pan in the center of the span.
   - Add weights one at a time until the maximum load is reached.

What factors helped increase the strength of your bridge?

What factors did you discover to be irrelevant for increasing the strength?

Did this activity take cooperative planning?

Were your ideas heard?

Are you pleased with your structure?

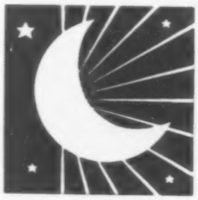
Women's Colleges

By the mid-1800s, education for upper-class males in America had become accepted, and several reform-minded women and men were beginning to agitate for improving the education of females. Colleges for women had been established before the Civil War, but Vassar, Wellesley, and Smith, which opened in the decade following the war, were the first women's colleges to have high academic standards for admission.

Women's colleges had a less structured curriculum than men's colleges. For this reason women's colleges adopted the teaching of scientific subjects and used laboratory instruction earlier than many men's colleges. Science education at the new women's colleges varied widely, as did their faculties' abilities in these fields.

Vassar College was fortunate in having Maria Mitchell (1818–1889) on its faculty from the time the college opened its doors in 1865 to shortly before her death. She was already a distinguished astronomer by this time, which was advantageous because she served both as a role model to her students and as a counter-example to the notion that women were incapable of scientific thought because their brains weighed less than those of men!

Excerpted from Science, Sex, and Society



Activity 18

Mind Reader

Group

Purpose

This is a game that uses numbers, and the object of the game is to have some fun while you problem-solve how to discover the number that only one person knows.

Time

10–20 minutes

Materials

Scratch paper

Pencils

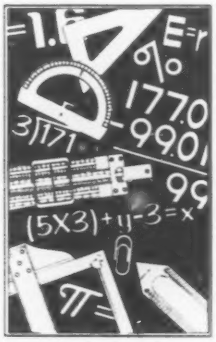
Procedure

One person thinks of a two- or three-digit number and writes it down. The person thinking of the number tells the group (the "mind readers") the number of digits. You may ask questions such as "Is it higher than 5?", "Is it lower than 300?", "Is it odd?", "Does it begin with 7?" The object is to "read the person's mind" and guess the number in as few tries as possible.

Follow-up/Variations

Another way to play this game is to have one person think of a number and give three to five clues. For example, "I'm thinking of a three-digit number; its digits are all even and all different; the sum of the digits is 18; the hundreds digit is twice as large as the tens digit. What is the number?"

(Answer = 846)



Success Story: Marie Curie (1867–1934)

Some people achieve success after changing their goals and embarking an a new path. Such was the case with Marie Curie, the discoverer of radium and the first world-famous female scientist. Curie won the Nobel Prize twice, first with her husband and Henri Becquerel in physics, and then by herself in chemistry.

Curie was born in Poland during the Russian occupation. Young Poles could only get a university education if they left their country. Curie worked hard as a governess in Poland to finance her sister's education in Paris, until, when she was twenty-three, Curie began her own studies in Paris. During her second year she met Pierre Curie, a French physicist. Her intention had always been to return to Poland after she completed her studies, but after much hesitation she agreed to marry Curie, beginning a collaboration that would lead to many scientific advances, including discoveries that are instrumental today in cancer cures through the use of radiation.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 19

Crime Solvers

Individual or Group

Purpose

You can learn how forensic scientists solve crimes by examining physical properties in order to separate the substances of a mixture. In this activity, which you can do alone, or as part of a group effort, you will experiment with physical properties of substances such as solubility, conductivity, and particle size.

The different scientific processes you will learn about are classification, control of variables, formulation of hypotheses, measurement, operational definitions, and prediction.

Time

1 hour

Materials (for each individual or group)

"Crime Solvers" handout

Substances mixed together in equal amounts:

- powdered sugar
- powdered calcium carbonate (obtained by scraping chalk with a knife)
- coarse-ground pepper
- rock salt

Water

Filter paper or paper towel

Funnel

Stirrer

Wool

Balloon

Fine mesh screen or flour sifter

Tweezers

Pencil

Paper

Scissors

Large paper plate

Procedure

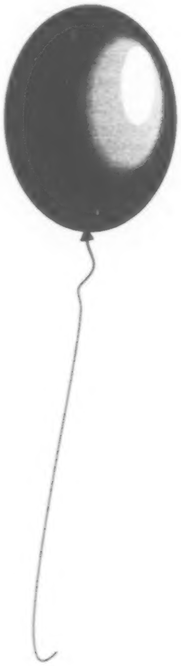
Before you begin the experiment, read through the entire instructions on the handout.

Follow-Up/Variations

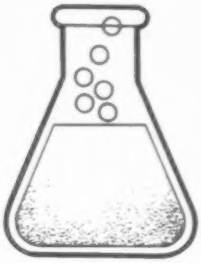
Ways to simplify the activity:

- Put each substance in separate containers and test their physical properties separately before mixing them.
- Use mixtures of two substances instead of four.

Thanks to Alice Bick and Chuck Vizzini for sending in this activity



Crime Solvers



Keep these points in mind:

- The physical state of the substances can be changed.
- What can each substance do that might be useful in separating the mixture?
- The equipment supplied is sufficient for the procedure.
- The sample will be divided into several portions to allow many experiments.
- List the steps and equipment to be used.

Chemistry and Forensics

A forensic scientist uses analytical chemistry and the scientific method in solving crimes. When gathering evidence, this scientist may use the skill separating substances in a mixture. Once the mixture is separated, she will do more experiments to identify the unknown substances.

The substances may be separated through knowledge of physical properties of the substances. Physical properties are characteristics that can be seen with the five senses and do not cause a substance to become a different substance. Physical properties include the following:

Static charge—an electrical charge that can be generated by rubbing a balloon with a wool cloth.

Solubility—refers to the ease with which a solid dissolves (disappears) in a liquid. If a solid can dissolve in a liquid, it is said to be soluble in the liquid. Salt and sugar are soluble in water. If a solid cannot dissolve in a liquid, it is said to be insoluble. Pepper and calcium carbonate powder are insoluble in water.

States of matter—exist in three forms: solids, liquids, and gasses. A physical change takes place when the state of matter changes, for example, when a solid is changed into a liquid or when a liquid is changed into a gas.

Here is one way to solve the crime:

1. Sift entire mixture. This should separate the salt and pepper from the calcium carbonate and sugar due to particle sizes.

2. Remove pepper from the salt with a balloon charged with static charge. The broken facets of pepper will hold a static charge while the stable crystalline structure of the salt will not.

3. Pour sugar and calcium carbonate into water. The sugar will readily dissolve while the calcium carbonate will not.

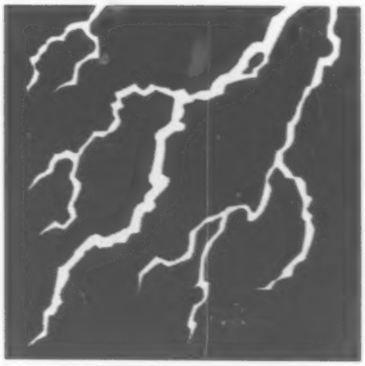
4. Pour the whole mixture through the funnel and filter paper. The calcium carbonate will remain in the filter while the sugar will pass through with the water.

If you are working in a group, after answering the following points individually, discuss the results.

1. Did your plan work?

2. What are the four substances?

3. What physical changes occurred?

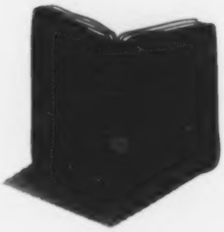


Seeking Higher Education

The early colleges placed little emphasis on academic degrees for faculty members. Both men's and women's colleges required little knowledge of certain subjects, and sometimes very little even of that. Thus Maria Mitchell's fame as an astronomer more than qualified her for her post at Vassar, although she had received no formal higher education. Advanced degrees rapidly came to be required for college educators, and women's colleges had an especially difficult time finding female Ph.D.'s to fill academic posts. Because some colleges and universities were reluctant to give Ph.D.'s to women, women's educational associations began funding European fellowships that enabled women to obtain Ph.D.'s and M.D.'s abroad.

American men had been going to Europe for their educations in larger and larger numbers from the 1850s on. Women were first permitted to study for advanced degrees in Switzerland in the 1870s, and gradually the other European countries followed suit. Some women studied abroad because it was impossible for them to obtain a doctorate in their chosen field in America; others went because a European education, especially in many scientific fields, was thought to be far superior to an equivalent education in the United States.

Excerpted from Science, Sex, and Society



Activity 20

Half-Life

Individual or Group

Purpose

When you do this activity you will discover that a radioactive substance never completely disappears from the environment. The scientific processes you will use are the following: measurement, observation, and use of a scientific model.

Time

30 minutes

Materials

"Half-Life Is More than Meets the Eye!" handout

Sheets of construction paper

Scissors

Record sheet

Magnifying glass

Procedure

Read through the entire activity before you begin. To begin, you must pretend that a sheet of construction paper is a radioactive substance. You will simulate radioactive half-life by repeatedly dividing that piece of construction paper in half. Then estimate how many times this radioactive substance can be divided in half.

Follow-up/Variations

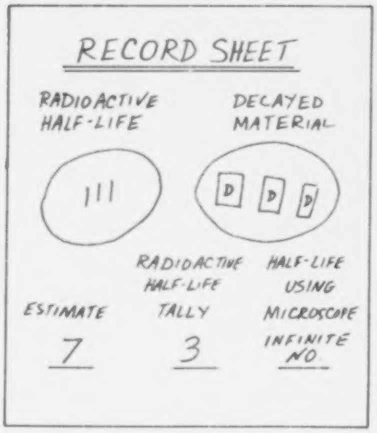
With sand, use a pan balance, removing half each time until you have less that 1 gram left in the radioactive substance container. Decide how many more half-lives would need to pass before you get down to the last grain of sand. How about the last atom in that grain of sand?

Thanks to Edie DeMay for sending in this activity

Half-Life Is More than Meets the Eye!

Radiation is a type of energy given off by unstable atoms. The atoms seek to become stable by dividing in half (decaying). This half-life is the time it takes for a radioactive material to lose half of its radiation. Half-lives range from a fraction of a second to several billion years. Chlorine has a half-life of 2.8 seconds and Uranium 235 has a half-life of 700 million years. The radiation that is given off is harmful to living things because it can change the chemistry of living tissue. Therefore, people must protect themselves from radiation. Uranium 235 presents a serious environmental problem when it remains radioactive (harmful) for so long.

You can discover the half-life of the radioactive substance by taking the following steps:



1. Cut the construction paper in half, placing one piece in the radioactive half-life pile and the other in the decayed material pile.
2. Make a tally mark in the radioactive half-life pile on the record sheet.
3. Pick up the paper (radioactive piece) and continue to cut in half, place, and tally until it is too small to be cut anymore.
4. Count the number of radioactive half-life tallies in the radioactive pile.
5. Use a magnifying glass or microscope to discover if the remaining radioactive piece can be divided to the last atom of paper.

Analysis

1. How did your estimate compare with the tally of radioactive half-lives?

____

2. How would this tally change when you use the magnifying glass or microscope?

____

3. After doing this activity, what can you infer about the time it takes radioactive substances to disappear?

____

4. What kind of problem(s) does radioactive half-life create for living things?

____

5. Is half-life really more that meets the eye?

____

Learned Behaviors

Why are there more men scientists than women scientists? Are men born with abilities that cause them to be better scientists than women? No, they are not. Think about your behavior and your actions. You have learned much of your behavior from your parents or other people. For example, you have learned how to count, how to speak English, how to read, and how to make decisions. You were not born with the knowledge to do these things. These things are learned behaviors.

Different people learn different behaviors, values, and beliefs. For example, one person may learn how to fish. Another person may learn how to play baseball. One person may learn to value having a job outside the home. Another person may learn to value working at home. Different people learn different things because they grow up in different social environments. They have different parents, schools, and friends.

People also live in different cultures. A culture is all of the attitudes, values, skills, and behaviors learned by a group of people. Sometimes you are aware of learning taking place. For example, as you sit in a classroom, you probably realize that you are in a learning environment. But you are learning all kinds of other things—in all kinds of places. Think about your friends. What do you learn from them? Do you learn to behave in certain ways because of their attitudes?

Excerpted from Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School

Activity 21

Crack the Codes

Individual or Group

Purpose

This fun activity will help you become aware of the many ways numbers are used in everyday life.

Time

20–60 minutes plus

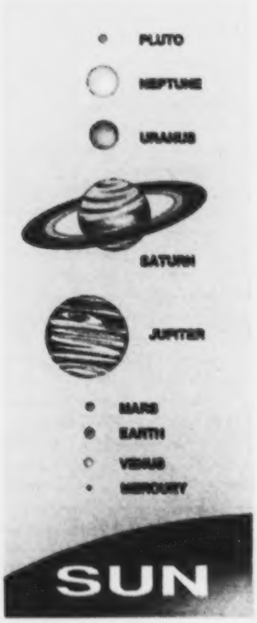
Materials

"Easy Number Codes" handout

"Harder Number Codes" handout

Procedure

You can do this exercise individually or in a group. Use your imagination to determine what the letters on the handouts stand for. Start with the easy ones, then tackle the advanced sheet. Make your own creative number statements, and if you are working on this at home, ask your family members for help. The correct answers are printed on page 154. You may very well come up with some answers that are different from the ones at the bottom of the handout. If the answer fits, it's correct!



Easy Number Codes

We use numbers in many ways. Each statement below contains numbers and the initials of words that will make it correct. Fill in the correct words.

Example: 2 A on a B   Answer: 2 arms on a body

1. 7 D of the W
2. 12 M of the Y
3. 100 L on a C
4. 4 Q in a D
5. 10 C in a D
6. 10,000 L on a M
7. 8 L on a S
8. 12 E in a D
9. 50 S in the US
10. 3 S on a T
11. 26 L in the A
12. 9 P in the S S
13. 13 S on the A F
14. 24 H in a D
15. 2 E on a F
16. 2 L on a H B
17. 10 P on a B L
18. 3 B M

Harder Number Codes

Each statement below contains numbers and the initials of words that will make it correct. Fill in the correct words.

Example: 16 O in a P Answer: 16 ounces in a pound

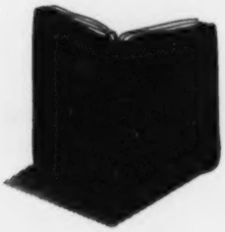
1. 365 D in a Y
2. 12 I in a F
3. 4 S on a S
4. 18 H on a G C
5. 3 F in a Y
6. 60 M in an H
7. 54 C in the D (with the Js)
8. 3 A in a T
9. 90 D in a R A
10. 100 C in a M
11. 7 W of the W
12. 4 Q in a G
13. 12 M in a Y
14. 12 S of the Z
15. 1 W on a U
16. 60 S in a M
17. 88 K on a P
18. 32 D F at which W F
19. 200 D for P G in M
20. 5 D in a Z C
21. 8 S on a S S
22. 11 P on a F T

Success Story: Lorraine Hansberry (1930–1965)

Sometimes part of being successful means taking risks and being controversial. Lorraine Hansberry, the first African American woman to write a Broadway play, did that very thing. Hansberry's father was the founder of the Negro Bank in Chicago and a fairly wealthy man. However, Hansberry had strong feelings about people who were poor, people who lived in slum dwellings similar to the ones her father owned.

In her plays, Hansberry wrote about unfair treatment of these people. She tried to express her feelings that American society was wrong to allow its citizens to live in such conditions. It was her willingness to risk controversy that made her play A Raisin in the Sun the winner of the New York Drama Critics' Circle Award in 1959.

Excerpted from Going Places: An Enrichment Program to Empower Students



Activity 22

River Study

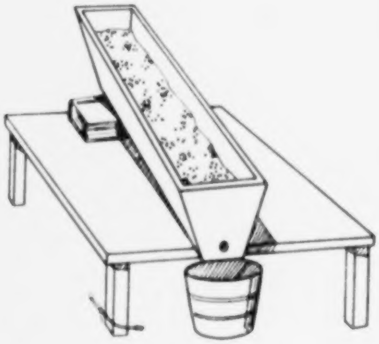
Individual or Group

Purpose

This activity will allow you to observe erosion caused by water and experiment with ways to prevent it. You will use the following scientific processes: communication, control of variables, experimentation, formulation of hypotheses, observation, and prediction.

Time

45 minutes



Materials (for each group)

Long trough

Sand

Books

Bucket

Additional materials needed

Soil, maybe some with grass or weeds

Rocks

Clay

Plastic model houses (as from a board game)

Water

Procedure

Each team will plan an environment resistant to erosion by following the numbered steps.

A long cardboard box (available from a floral supply house), a planter or a long dishpan can be used as a trough.

Thanks to Cathy Preiss for sending in this activity

River Study

Running water is the cause of most soil erosion. Erosion starts with rainfall. As the water runs off the land, it forms small streams, which eventually form rivers. At each of these stages, the water causes erosion. The rain loosens the particles of soil and rock and often carries the particles with it along the streams and rivers.

There are several factors that affect the amount of erosion that takes place. These are the amount or speed of running water, the gradient, the type of soil and bedrock on the bottom and sides of the river. Land is constantly eroding, especially where the slopes are steep. There are ways to slow down water erosion on steep slopes:

- tree and grass plantings, where roots hold soil that might be carried away
- contour plowing, where rows of crops follow the curve of the land; that is, the rows run sideways rather than up and down
- terracing, where ridges follow the contour of the land, also running sideways

1. Prepare the trough:
    - Cut drain hole in one end of trough.
    - Fill trough 1/2 full of sand.
    - Use books to elevate the trough at the end opposite the drain.
    - Place bucket under end with the drain.
2. Build a river and surrounding hills and valleys making them withstand soil erosion:
    - Use your hands to sculpt the riverbed in sand.
    - Use the soil, rocks, and clay for hills and valleys.
    - Place your homesite in an area that is most resistant to erosion.
3. Now the real test! Each team will observe the erosion that takes place when you:
    - Slowly pour water down the riverbed to simulate a flowing river.
    - Then quickly pour a lot of water down the riverbed to simulate the effects of floods.

Would you choose the same homesite again? Why or why not?

Which contours eroded first? Why? Which contours eroded more? Why?

Did water speed make a difference?

What features would you look for in riverbeds, hills, or valleys to predict the least erosion?

Astronomers

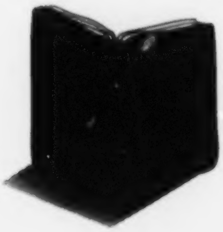
Astronomers seek answers to questions about the nature of the universe such as its origin and history and the evolution of our solar system. They use physics and math to study and determine the behavior of matter and energy in distant galaxies.

To make observations of the universe, astronomers use a variety of tools, such as large telescopes, radio telescopes, spectroscopes to analyze light from stars and determine their chemical composition, and other instruments that can detect electromagnetic radiation from distant sources.

Today's astronomers spend little time visually observing stars through telescopes because photographic and electronic light-detecting equipment is more effective with dim or distant stars and galaxies. Some astronomers concentrate on theoretical problems and seldom visit observatories. Such astronomers use the laws of physics to develop, for example, theoretical models of how stars came into being, and how they change over time.

Students interested in careers in astronomy should have imagination, inquisitiveness, perseverance, ability to concentrate on details, and the ability to work independently.

Excerpted from How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science



Activity 23

Star Time

Individual or Group

Purpose

To observe that the earth's rotation causes the apparent movement of constellations across the sky. You will learn to tell time by observing the position of the Big Dipper relative to the North Star. To do this activity you will use the following scientific processes: communication, inference, and observation.

Time

30 minutes

Materials

"Star Time" handout

"Poster" handout

"Question Cards" handout

"Answer Cards" handout

Procedure

Each individual or group will tell time by following the numbered steps.

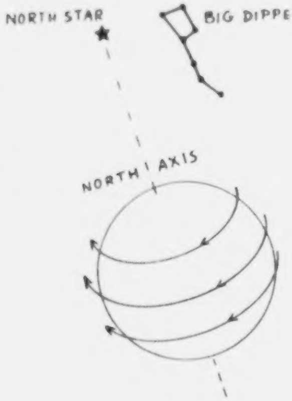
1. Select a Question Card.
2. Observe the position of the Big Dipper on the Question Card.
3. Find a similar position on the Poster.
4. Observe the time of this position and line it up with the horizon line.
5. Write the time on the Question Card.
6. Continue to select Question Cards until all have been selected.

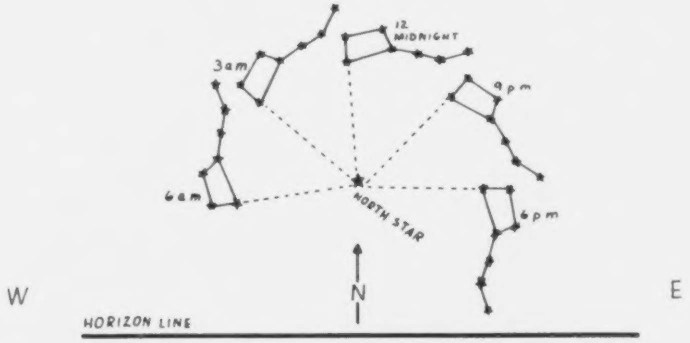
Thanks to Sue Griswold for sending in this activity

Star Time

The earth rotates on its axis once every twenty-four hours with the North Axis aimed toward the North Star. This rotation of the earth causes an apparent movement of the constellations across the sky. The constellations near the North Star appear to circle around it (they are call circum-polar stars). By careful observation of the Big Dipper, a simple and natural "clock" can be devised.

Because constellation positions are different for each month, a particular date was chosen for the poster. This example has dotted lines to show girls the relative position of the Big Dipper to the North Star.



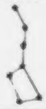


This chart represents the position of the Big Dipper at different hours on the night of March 15.

After completing the activity answer these questions. Discuss them if you are working with a group.

1. How did the position of the Big Dipper change?
2. Which star "appears stationary"?
3. What is the explanation for the apparent stationary state in terms of the earth's axis of rotation?
4. What causes the apparent movement of the constellations across the sky?
5. How did your group cooperate?
6. What was the hardest part about cooperating?

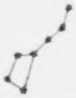
QUESTION CARD



horizon line

The time is________________

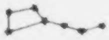
QUESTION CARD



horizon line

The time is________________

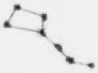
QUESTION CARD



horizon line

The time is________________

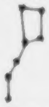
QUESTION CARD



horizon line

The time is________________

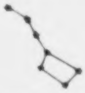
QUESTION CARD



horizon line

The time is________________

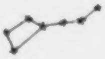
QUESTION CARD



horizon line

The time is________________

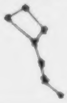
QUESTION CARD



horizon line

The time is________________

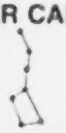
QUESTION CARD



horizon line

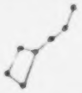
The time is________________

ANSWER CARD


horizon line

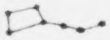
The time is 6 a. m.

ANSWER CARD


horizon line

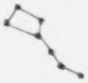
The time is 3 a. m

ANSWER CARD


horizon line

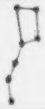
The time is 12 midnight

ANSWER CARD


horizon line

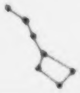
The time is 9 p. m.

ANSWER CARD


horizon line

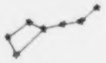
The time is 6 p.m.

ANSWER CARD


horizon line

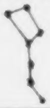
The time is 9 a. m.

ANSWER CARD


horizon line

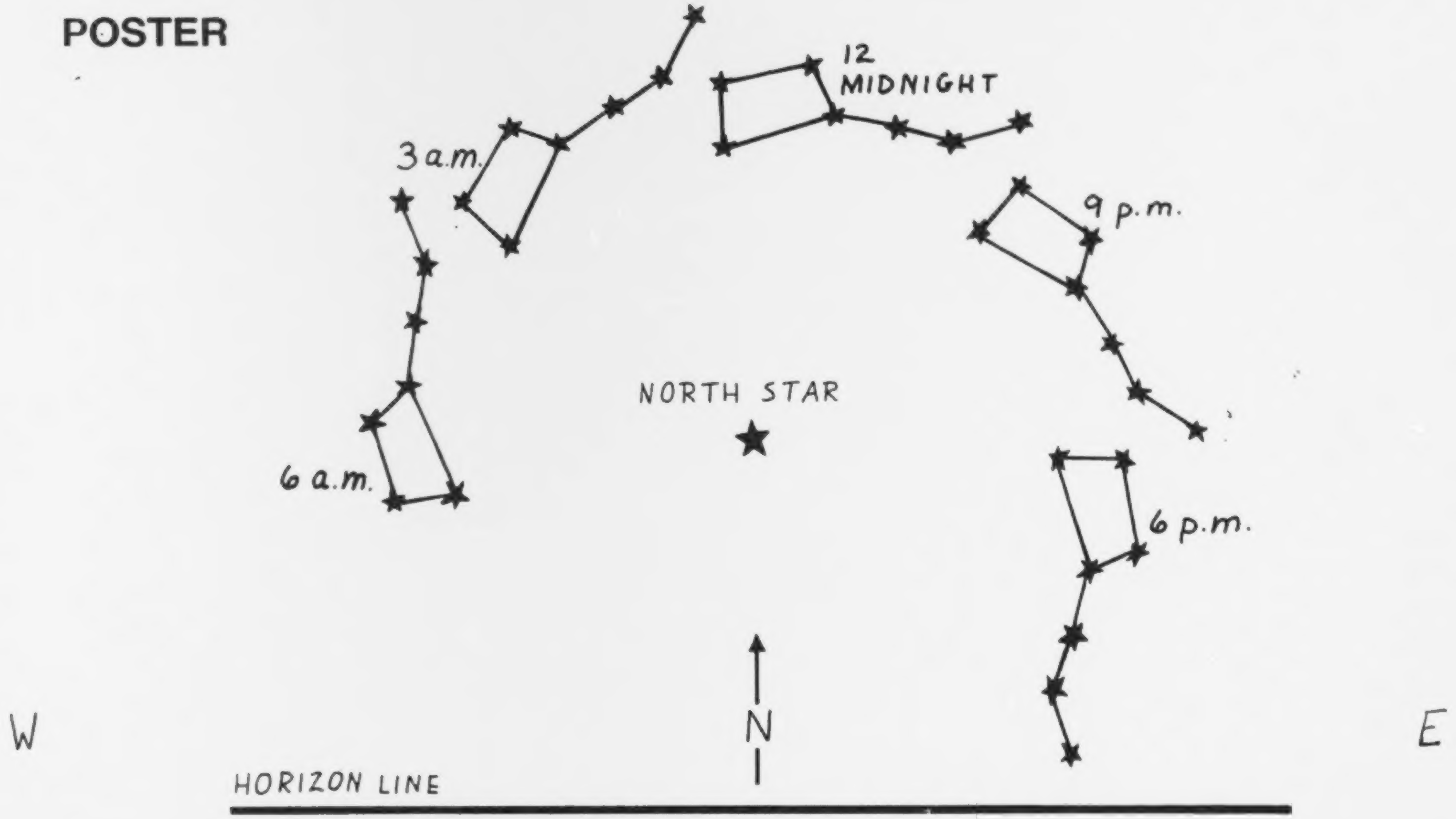
The time is 1 a. m.

ANSWER CARD


horizon line

The time is 7:30 p.m.

POSTER


12
MIDNIGHT
3 a.m.
9 p.m.
NORTH STAR
6 a.m.
6 p.m.
W
N
E
HORIZON LINE

This chart represents the position of the Big Dipper at different hours on the night of March 15.

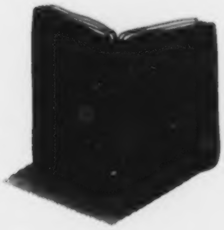
Earth Science Careers

Geology—geologists study the structure, composition, and history of the earth's crust in order to locate natural resources, give warnings of natural disasters, and insure that buildings are constructed on adequate foundations.

Geophysics—geophysicists usually specialize in one of three phases of the science—solid earth (search for oil and mineral deposits; study earthquakes), fluid earth (study underground and surface waters including glaciers, snow, rainfall, and flood control), and upper atmosphere (study the composition and atmosphere of the moon, planets, and other bodies in the solar system).

Meteorology—meteorologists study the atmosphere's physical composition, motions, and processes. This knowledge is applied to forecasting weather, understanding climate, and solving practical problems in agriculture, transportation, communications, and health.

Oceanography—oceanographers study plant and animal life in the ocean in order to determine the effects of pollution on animal life; study and collect data on ocean tides and currents, which may lead to more accurate weather prediction; and study undersea mountain ranges and valleys in order to locate minerals, oil, and gas under the ocean floor.



Excerpted from How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science

Activity 24

Spatial Encounters: Completion

Individual or Group

Purpose

To create an image of the whole from a part. The completion of a figure from limited information is often required in everyday life. An archeologist creates a design from pieces of pottery. An artist "sees" a completed figure from only a few sketched lines. Other careers that require the skill of figure completion are paleontology, geology, radiology, and chemistry.

Time

15–20 minutes

Materials

"Figure Completion" handouts

Procedure

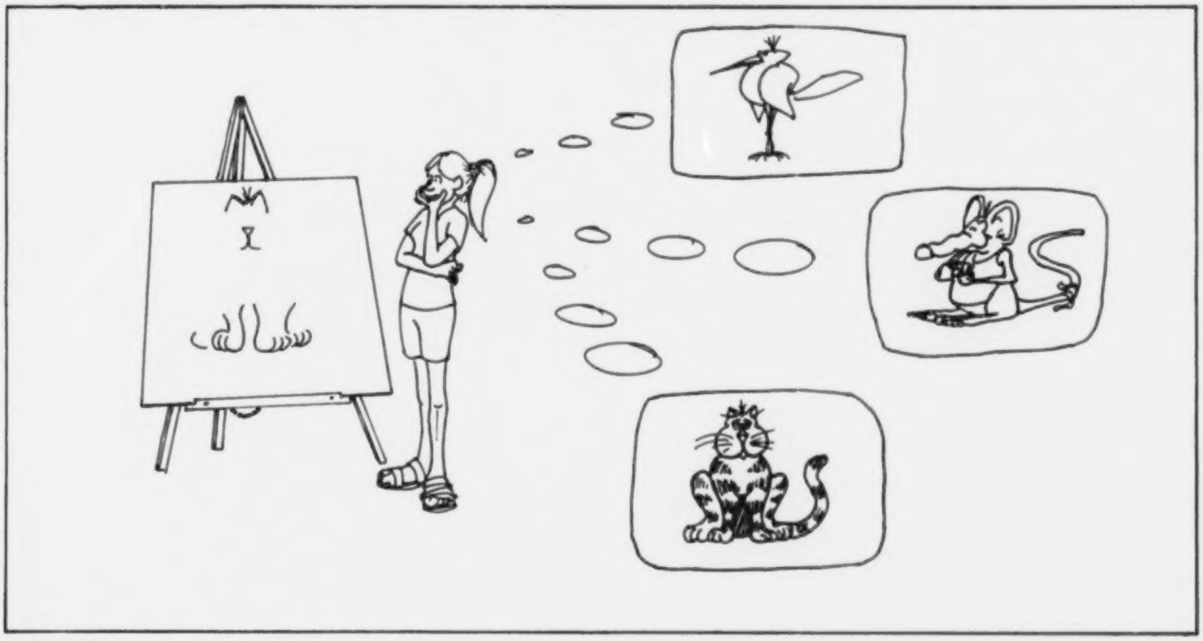
Each of these exercises contains an incomplete drawing of an object. The idea is to look at the incomplete drawing and visualize what it would look like finished. To the right of each incomplete drawing are three finished pictures. Select the one that is the completed drawing of the figure in the box on the left. Circle your answer. Check your answer on the bottom of this page.

1. A
2. B
3. A
4. C
5. A
6. C
7. B
8. C
9. B
10. C
11. A
12. B

The ability to perceive spatial relationships is an important aspect of many careers. Among them are

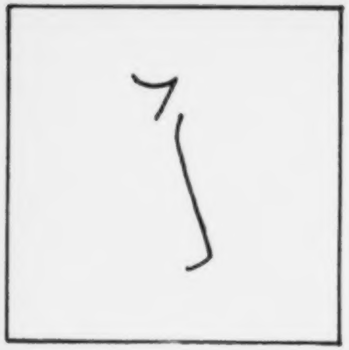
- Acoustics
- Aerodynamics
- Airport Management
- Anthropology
- Architecture
- Art and Design
- Astronomy
- Astrophysics
- Automechanics
- Aviation
- Bacteriology
- Biochemistry
- Biology
- Botany
- Carpentry
- Ceramics
- Chemistry
- City Planning
- Communication Arts
- Computer Science
- Construction
- Cryogenics
- Dance
- Dentistry
- Drafting
- Earth Science
- Engineering
- Environmental Planning
- Fish and Wildlife Management
- Forestry
- Geography
- Geology
- Geophysics
- Glass Technology
- Graphic Arts and Printing
- Health Services
- Horticulture
- Hydrology
- Industrial Arts
- Industrial Design
- Industrial Hygiene
- Industrial Technology
- Landscape Architecture
- Mathematics
- Medical Technology
- Medicine
- Metallurgy
- Nursing
- Occupational Therapy
- Pharmacology
- Pharmacy
- Physical Education
- Physical Therapy
- Physics
- Physiology
- Plumbing
- Quality Control
- Radiology
- Recreation
- Shipping
- Telecommunications Art
- Transportation
- X-Ray Technology

Figure Completion



EXAMPLE

Look at the drawing above. The drawing is not finished. Now look at the figures in the boxes on the right. One of them is the completed drawing of the figure in the box on the left. Which one is it? Circle the correct answer. Then, go on to the following drawings.



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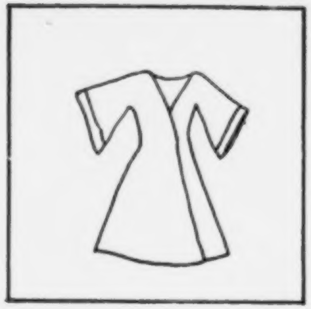

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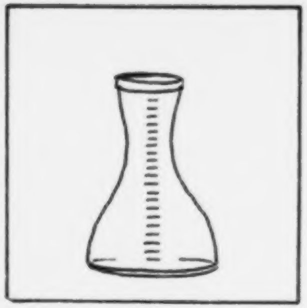

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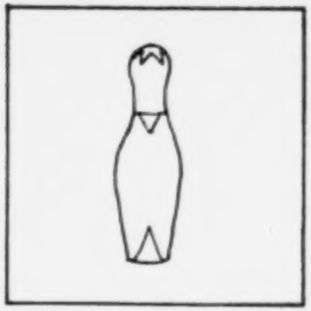
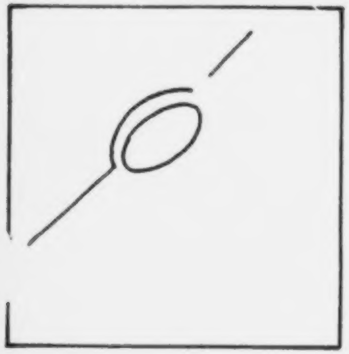


C.



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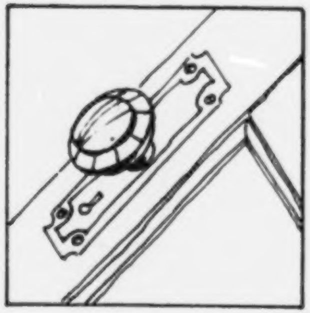

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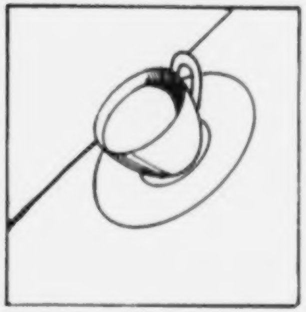

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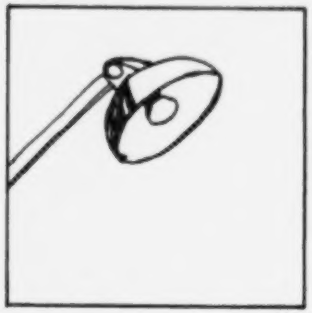

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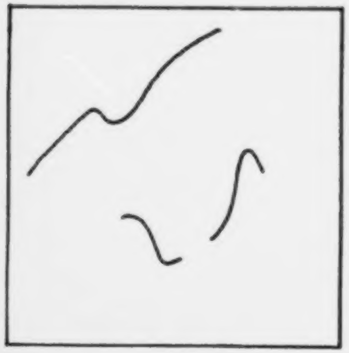

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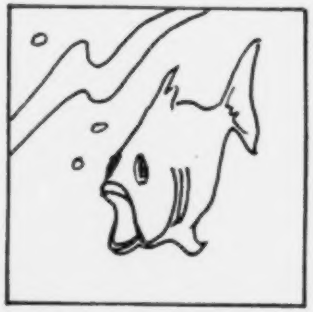

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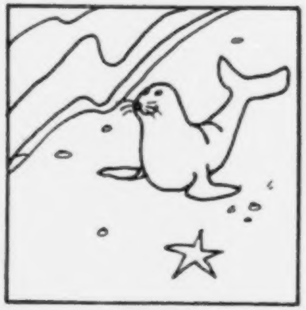

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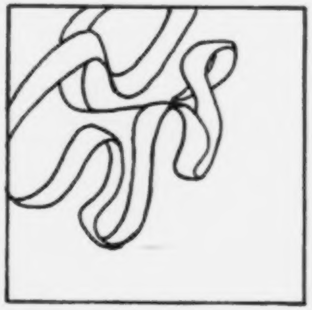

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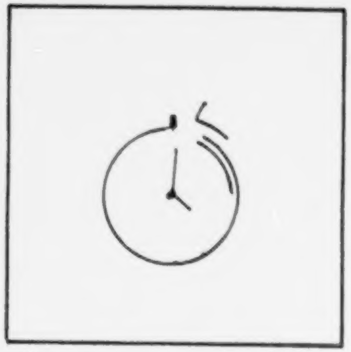
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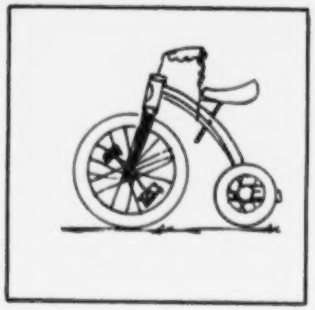
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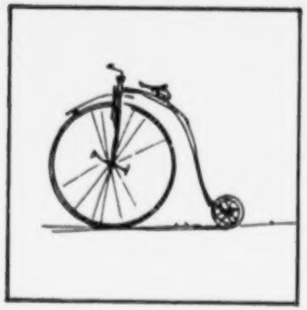
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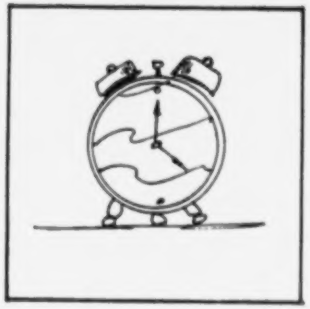
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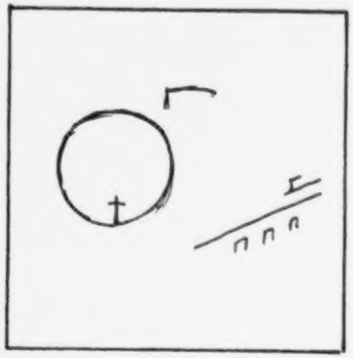
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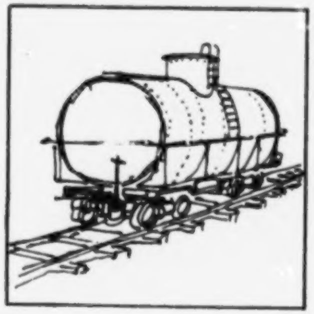
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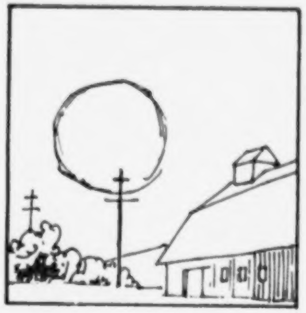
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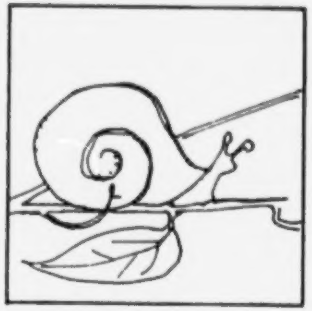
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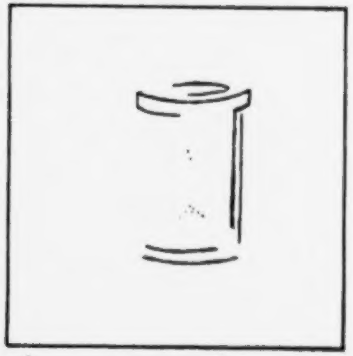
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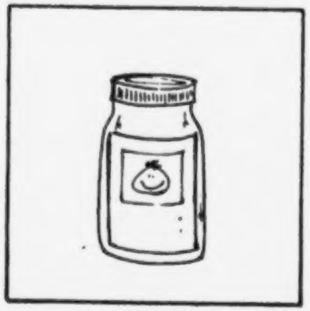
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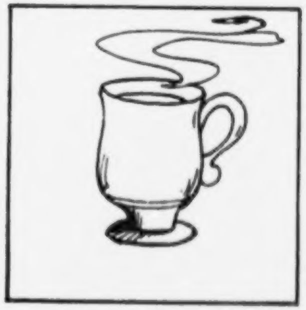
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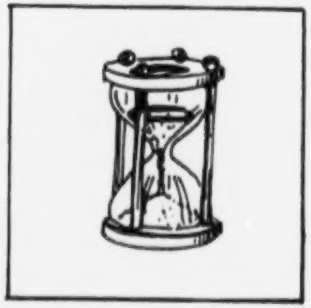
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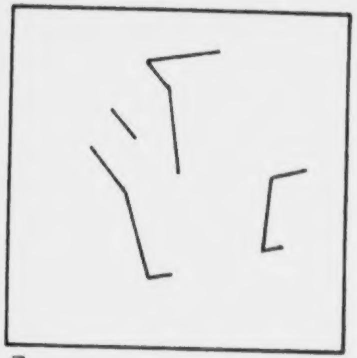

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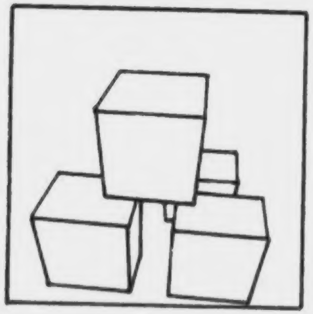

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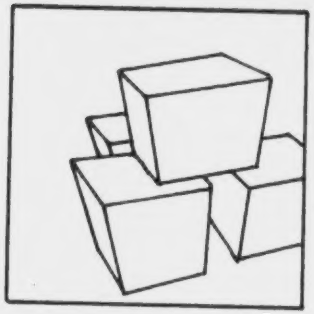

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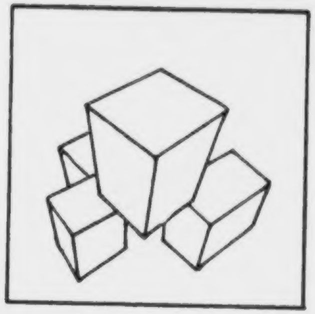

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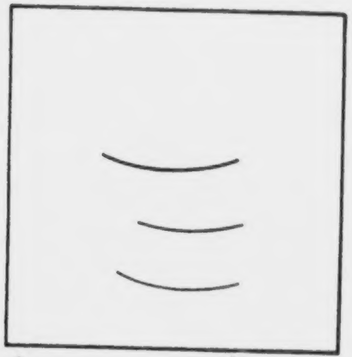

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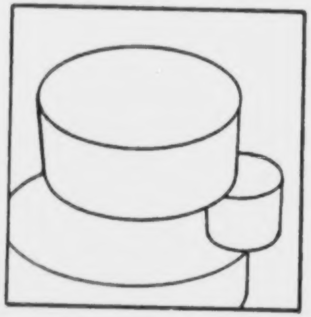

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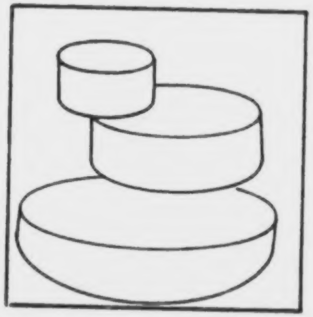

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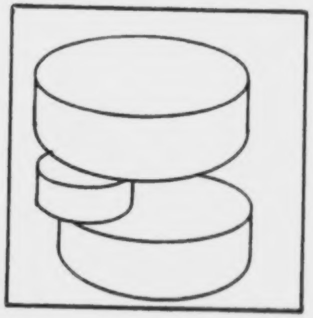

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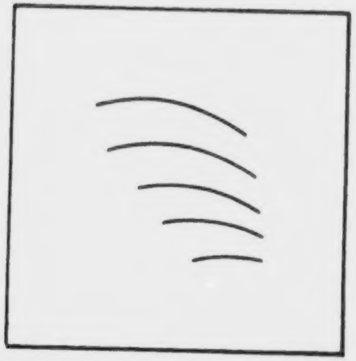

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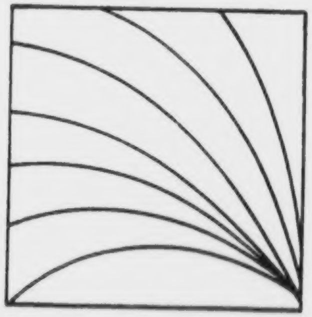

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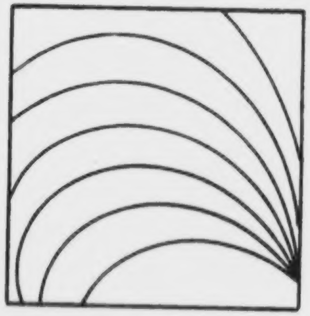

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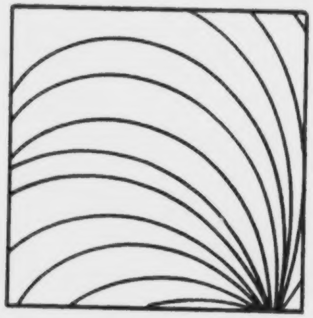

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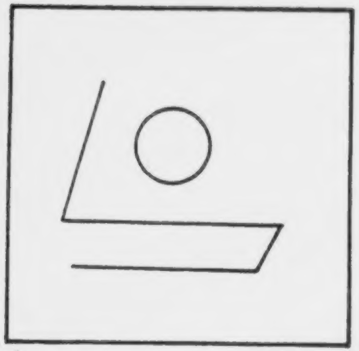

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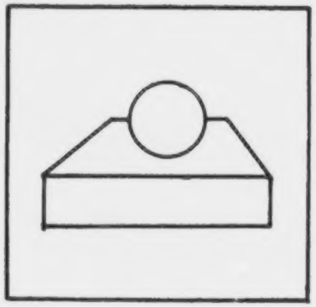

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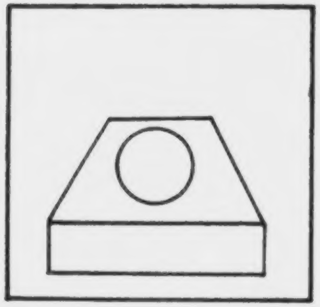

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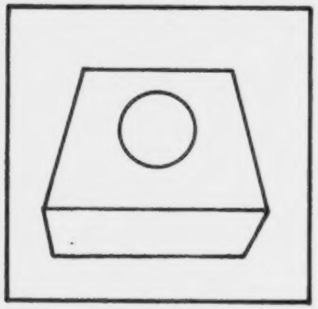

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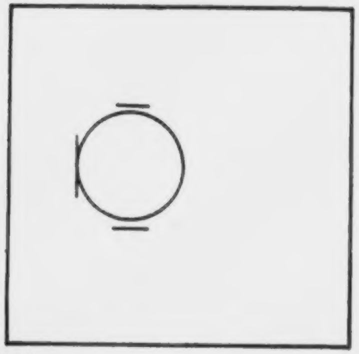

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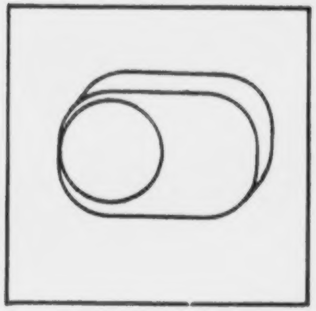

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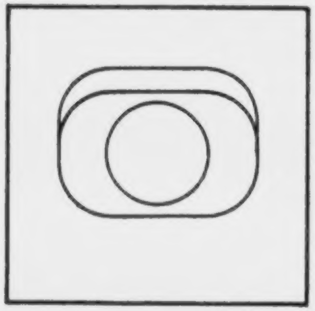

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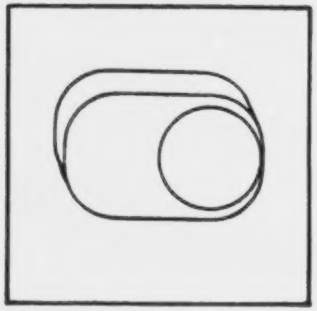

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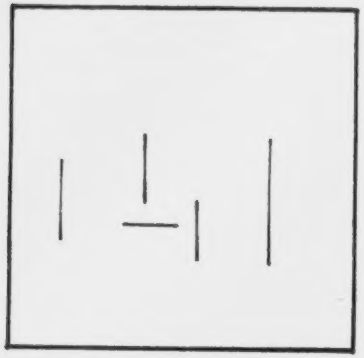

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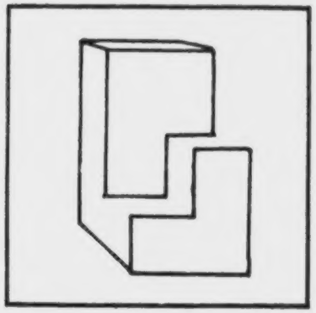

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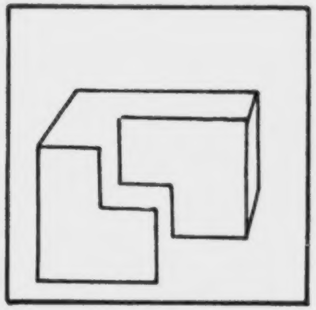

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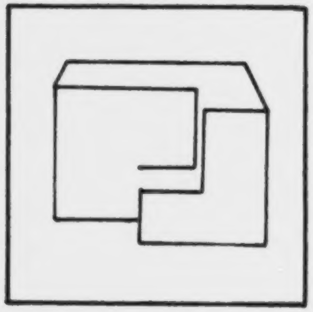


C.

Activity 25

Spatial Encounters: Rotation

Individual or Group

Purpose

This activity will help you learn to rotate an abstract image mentally, and to imagine the rotation of a pictured object. The ability to rotate objects mentally is required in many sports. Imagine how a baseball must rotate through space to land in the catcher's mitt. Or imagine how it feels when jumping off the high dive to do two complete rotations before hitting the water.

This type of mental rotation applies to careers such as auto mechanics, aircraft mechanics, plumbing, and electrical work. Craftspeople project a mental image of the desired final arrangement of mechanical components and then work toward it. The ability to mentally rotate objects is also required in careers such as construction, engineering, astronomy, and geology.

Time

20–30 minutes

Materials

"Figure Rotation" handouts

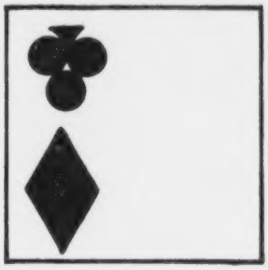
Procedure

Look through the set of exercises. Notice that each page has a drawing in a box on the left-hand side of the page. Study the shape of the figure inside the box. Now, look at the other four boxes on the page. Can you mentally rotate the box on the left-hand side of the page so it looks like one of the other four boxes? Pick the box from the other four that will match the rotated box. Remember that you are mentally rotating the entire box, image and all, rather than just the image itself. The answers are below.

11. D
12. D
13. C
14. B
15. B
16. C
17. D
18. A
19. D
20. C
21. B
22. A

Figure Rotation

Look at the figures below. At the top is a box labeled 1. It has an object in it. Below it are four boxes labeled A, B, C and D. Pick the box that will exactly match the box labeled 1 when it is rotated. Now do the same for numbers 11 through 22.



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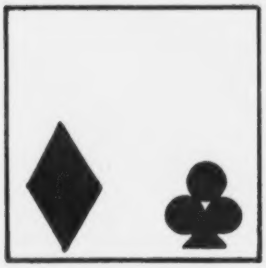

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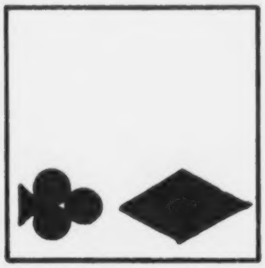

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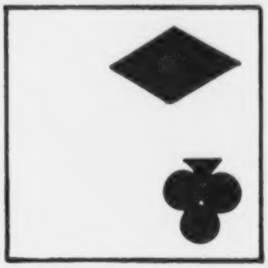

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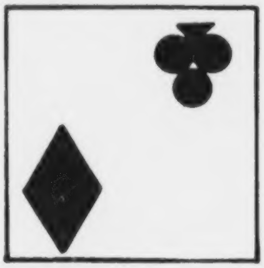
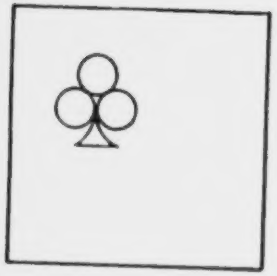
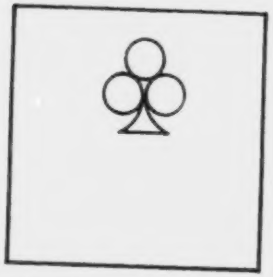


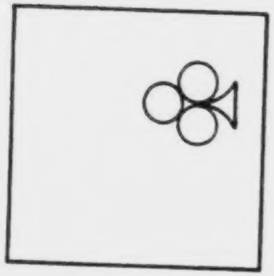
D.



11.



A.



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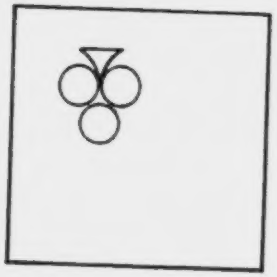

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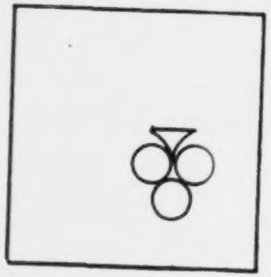

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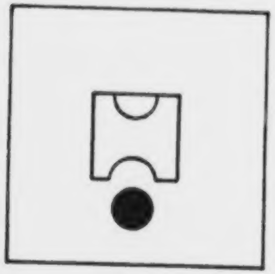

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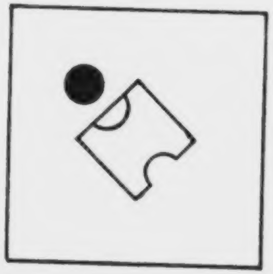

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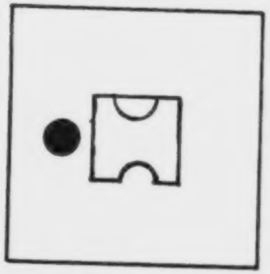

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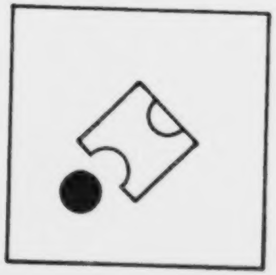

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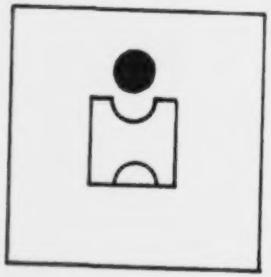

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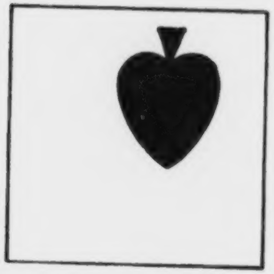

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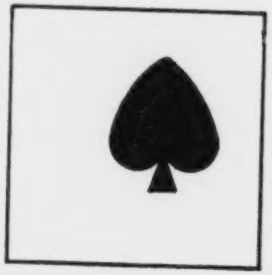

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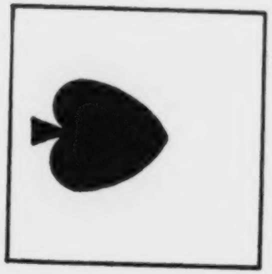

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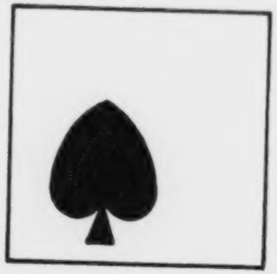

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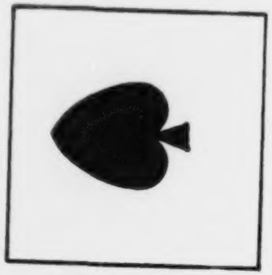

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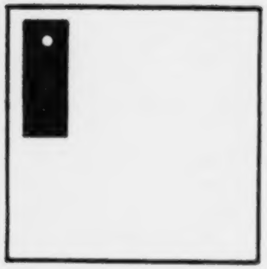

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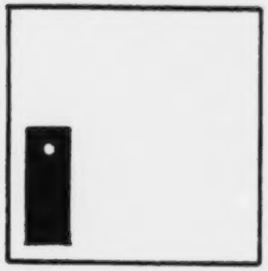

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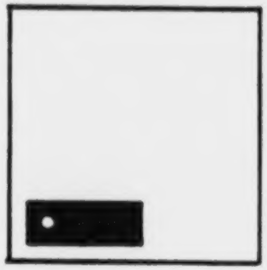

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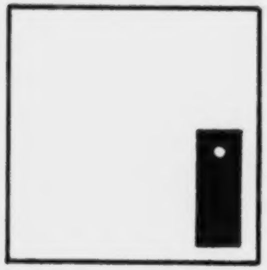

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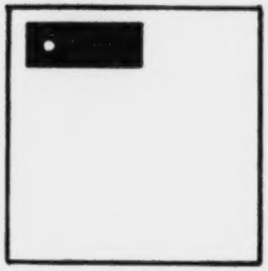

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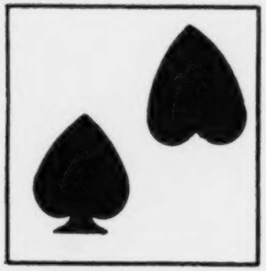

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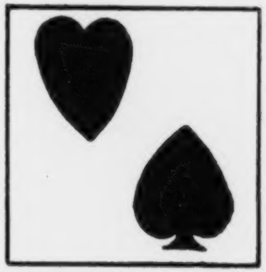

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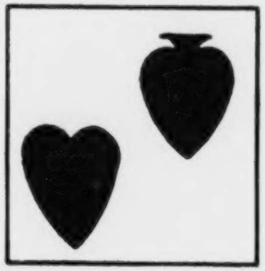

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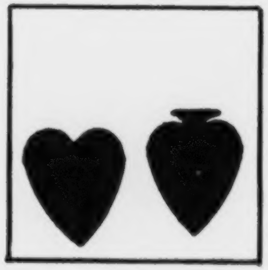

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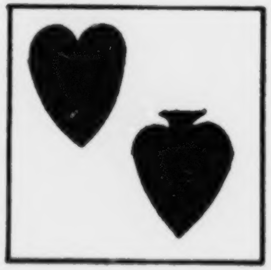

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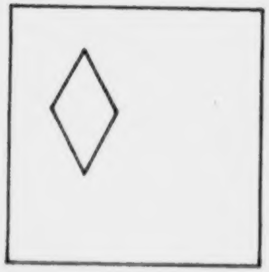

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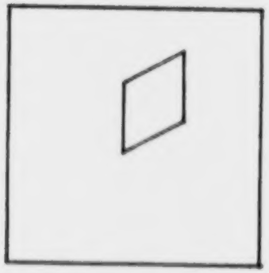

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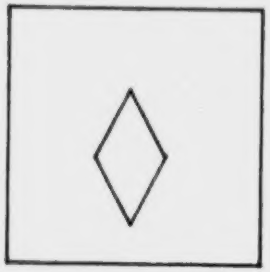

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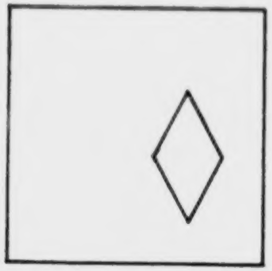

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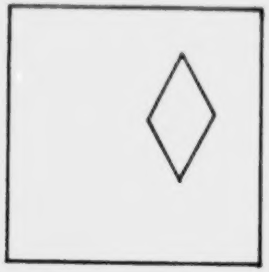

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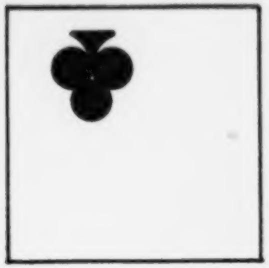

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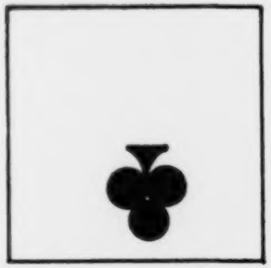

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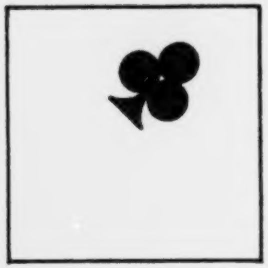

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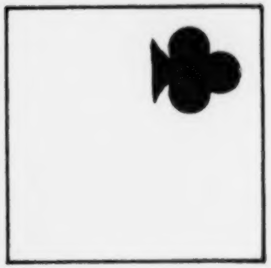

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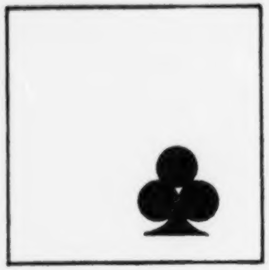

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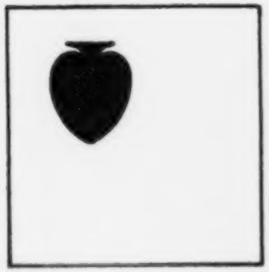

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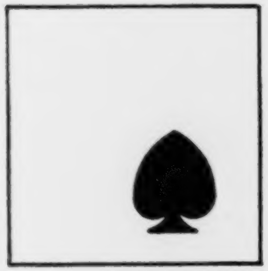

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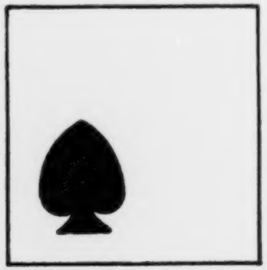

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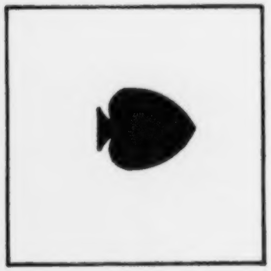

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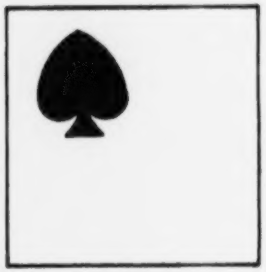

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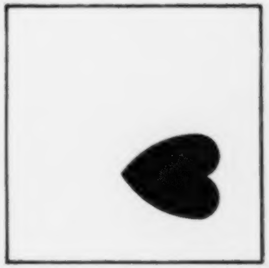

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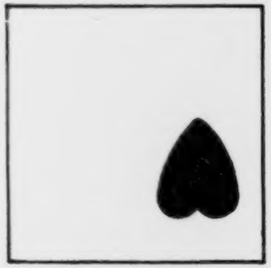

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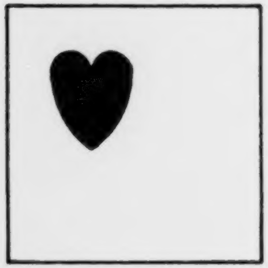

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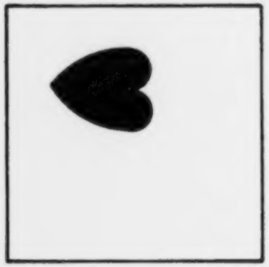

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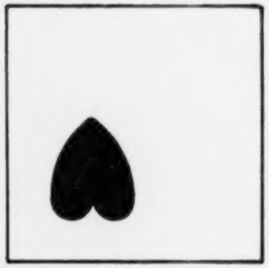

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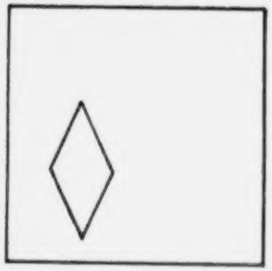

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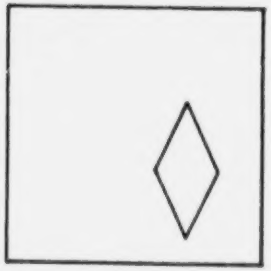

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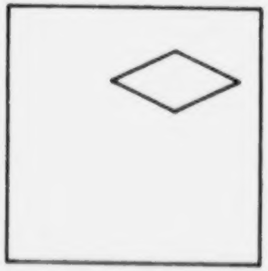

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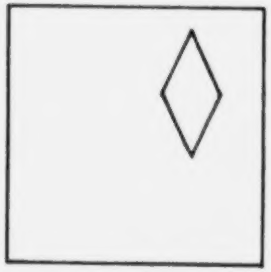

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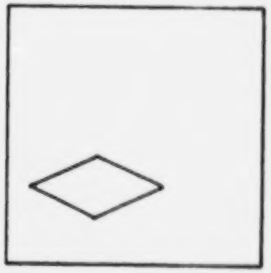

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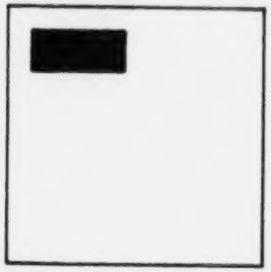

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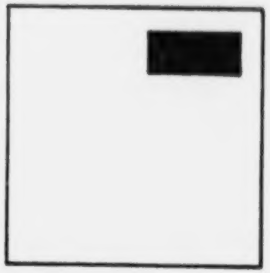

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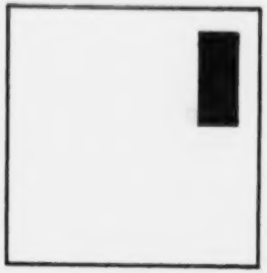

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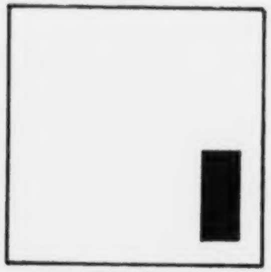

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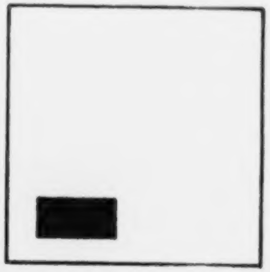

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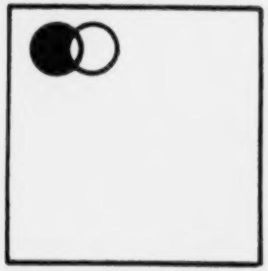

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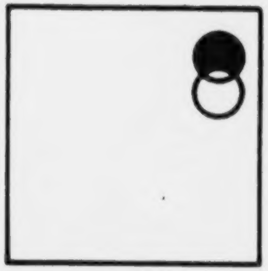

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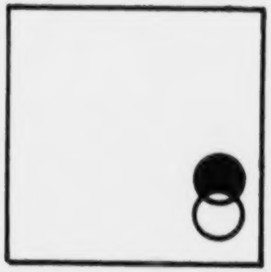

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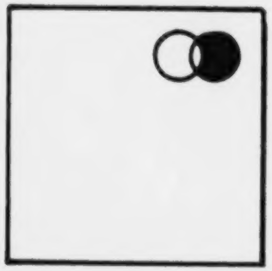

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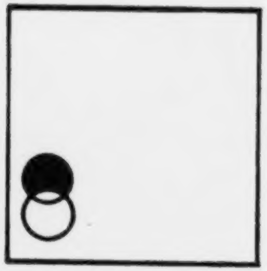

D.

Inventions by Women

The U.S. Patent Office reports numerous inventions by women, including a horse's feed bag and the white lines on roads. On May 5, 1809, Mary Kies was the first woman to receive a patent; it was for a process of straw-weaving with silk or thread.

By 1910, one hundred years after Mary Kies' patent, over 10,000 patents had been issued to women. Women did not confine their inventive genius to domestic articles, although items such as an ice cream freezer, a weighing scale, and a fan attachment for a rocking chair do appear in patent records. Instead, female inventiveness went further afield. For example, the most remarkable invention by a woman during 1841–1851 was a submarine telescope and lamp, patented by Sarah Mather in 1845.

In the next decade, female patents appear for locomotive wheels, devices for reducing straw and other fibrous substances for the manufacture of paper pulp, low-water indicators, fire alarms, railroad car heaters, and burglar alarms.

Excerpted from How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science

Activity 26

Career Auction

Group

Purpose

After completing this activity you will be aware that each work situation or career offers both personal and material rewards, and when you begin to make a job choice you will take into account the personal and material rewards offered by the job.

Time

Takes place over a week's time

Materials

Chalkboard and chalk

Paper and pencils

Resources with occupational descriptions, summaries, and briefs (optional, and as available from the school counselor or library)

Currency such as play money or paper notes to use during the "auction"

Procedure

This career auction is designed to be conducted over a week's time and consists of three parts: Day 1, about a week before the "career auction"; Day 2, the day before the auction; and Day 3, the auction itself.

Over a week's time, each participant will (a) select several occupations from a list of occupations (compiled by the group) in their particular region; (b) research the selected occupations regarding personal and material rewards of those occupations; and (c) hold an "auction," in which group members bid on the selected occupations.

Day 1: Getting Ready

1. Each work situation (job) or career offers its own personal and material rewards. And we know that

personal and material rewards are an important part of job satisfaction for anyone! The preliminary activities you will be doing are in preparation for the auctioning of occupations, which you will do the following week.

2. Brainstorm a long list of occupations (fifty to sixty), and list the ideas on the board.
3. From that list, select occupations that are found in and are typical of your geographic region. (In Appalachia, for example, such occupations might include mining and related technological careers; crafts such as quilting, glassblowing, and woodworking; and various engineering occupations.) If any of these suggested occupations reflect gender-biased titles (such as fireman and policeman), change those titles to eliminate gender bias (firefighter and police officer). The final list should consist of occupations found in your geographic region, with job titles free of gender bias.
   Keep in mind that many occupations found in your region can also be found in other areas of the United States (doctor, lawyer, editor, police officer, bus driver, social worker, clerical worker), whereas other occupations are more specific to their region (such as mining and crafts in Appalachia).
4. Consider the list of occupations complete or final at this point, and select at least five occupations you might be interested in pursuing.
5. Next, you will be researching your selected occupations for the personal and material rewards offered by those occupations. List some examples of personal and material rewards such as the following:

Personal Rewards

- Recognition for work well done
- Advancement/promotion based on merit, work performance
- A pleasing work environment
- Admiration from others because of performing the work well
- Sense of individual responsibility for work
- Supervision of others, leadership
- Increase in status and prestige due to the job title

Material Rewards

- Automatic salary increases based on time spent with company
- Cost-of-living raises
- Paid sick leave/paid vacation
- Paid medical and dental insurance
- Pension/retirement plan
- Bonuses or commissions in addition to salary
- Chance to purchase stock in the company

The next step is for you to gather information on your selected occupations. You can find work-related information in libraries, local and state employment agencies, or career education and school guidance departments. You can also ask parents or friends who are in business, business people in the community, and school counselors if they can help you brainstorm occupations and help you access job descriptions and summaries.

6. Set a date to complete your research. We recommend that you complete the research within one week so that you continue to stay interested in the project.

Day 2: Getting Set (about a week later)

1. Use this time to discuss any problems you had during your research. (Allow as much time as necessary for this.) If you have not had any problems, or when all your questions have been resolved, discuss your findings in a group setting, that is, the personal and material rewards of your selected occupations.
2. In the remaining time, decide on a mode of currency (play money, paper notes) to be used during the bidding on the following day, that is, Auction Day (and be sure to have that currency the next day).
3. Set a bidding limit (minimum/maximum) for the occupations that will be up for auction. For instance, all bidding could start at $100 for any occupation, and no bidding should go over $1,000 for any occupation. Or, all bidding on high-paying occupations such as doctor, plumber, and engineer could start at $250, with a maximum of $3,000.
4. Finally, choose at least three occupations from your list to auction on the following day, making note of your selections on the chalkboard.

Day 3: Career Auction Day (the following day)

List the occupations to be auctioned on the blackboard or on a large sheet of paper, and choose one person from the group to read the beginning instructions, and one person from the group to be the "auctioneer" when the time comes. The auctioneer should be able to "sell" the occupations, and make them sound appealing to all the interested buyers!

1. Distribute the currency you have decided to use and begin the auction by having one person from the group read aloud the following instructions:

"Each student will try to sell at public auction their selected occupations from the list posted on the board or paper. Each item will go to the highest bidder. This is a once-in-a-lifetime chance to express, on the basis of what you buy, what you'd like to be. Bid on each item based on how important the personal and/or material rewards of the occupation are to you. Think before you buy. No refunds or exchanges will be allowed."

2. Each of you will then try to "sell" your occupations by telling the rest of the group members about the personal and material rewards of those occupations. Then allow a few minutes for everyone to read the list on the board and to write down the occupations they want to bid on.
3. Now, the auctioneer you have selected can begin to auction the occupations, one at a time.
4. When all of you have spent your currency, end the auction. Then begin a group discussion of the experience and what you have learned about yourself and others by the occupations you have bought. The discussion can focus on the following points:
   - What have you learned about personal and material rewards that occupations can offer?
   - Are personal and/or material rewards important to you?
   - How did it feel to bid on your job? Why did some occupations have a higher minimum and maximum bidding limit?
   - Were you as competitive or aggressive or assertive as you wanted to be when you were bidding on your occupation?

Follow-up/Variations

1. Research regional occupations as a first step before you brainstorm the list of occupations to be auctioned.
2. Research your selected occupations by going out into the community and interviewing employers and other business people. Before you go, put together a questionnaire or list of questions you want to ask.
3. Suggest to your teacher or counselor that they take you on a field trip to the library or a federal or state employment agency to research your selected occupations.

Reflection

Now that you have completed one or more of the exercises in the section Exploring Careers, jot down some of your thoughts about what you have learned from the activities and the readings.

The most important thing I found out about myself was . . .

The most interesting activity was . . .

because . . .

The most interesting reading was . . .

because . . .

Has what you have learned changed what you want to do in the future?

How?

Set Your Own Career Goals

Now that you have had a chance to explore the world of work and define your interests, it's time for you to put it all together. In the final analysis it will be your initiative and understanding of who you are and what makes you happy that will lead to your finding a job or a career that you enjoy and that challenges you.

Activity 27

Interviews with Friends and Family **Individual**

Purpose

This information will be invaluable to you as you hear from each person you interview how they have taken their unique path to their line of work. You can get a sense of how others dealt with what they saw as barriers, and also how they came to view success.

Time

3 Hours

Materials

"Interview #1" and "Interview #2" handouts or notebook with a list of questions to ask and space to write the answers

Friends and family members to interview

Procedure

In this activity we suggest you ask relatives, family friends, and neighbors about their occupations—how they selected a career path, how they prepared for it, and what they like and dislike about it.

In the interview process talk with people you know; for example, your parents and their friends and to your friends' parents, ask them what their work involves on a daily basis and what they like and don't like about it.

1. Interview at least two people who have jobs that interest you, and that they seem to like. Below are some questions you can use.
2. Afterwards, think about what your interviewee told you, and answer the questions that follow.

Interview #1

Name

Position

Organization

What do you do in your particular job?

What do you like about your job?

What do you dislike about your job?

How did you decide to get into this work?

What training and experience were required for you to get this job?

What career possibilities do you see for yourself?

If I were to go into this line of work, what advice would you have for me?

Review for Interviewer

Does anything appeal to me about this job?

What would I not like about this job?

Do I want to find out more about it?

If yes, what might be my next step?

Interview #2

Name

Position

Organization

What do you do in your particular job?

What do you like about your job?

What do you dislike about your job?

How did you decide to get into this work?

What training and experience were required for you to get this job?

What career possibilities do you see for yourself?

If I were to go into this line of work, what advice would you have for me?

Review for Interviewer

Does anything appeal to me about this job?

What would I not like about this job?

Do I want to find out more about it?

If yes, what might be my next step?

Success Story: Wilma Rudolph (1940-)

Some people overcome what appear to be impossible odds to achieve success. When all the cards are stacked against them, they try even harder. Wilma Rudolph, the first American woman to win three Olympic gold medals in track and field events, is one of these people.

Wilma was the seventeenth of nineteen children, and was crippled by a severe case of polio when she was four years old. She was unable to walk without help until she was eight; and then she took off.

Wilma became an excellent basketball player and was spotted by a coach. She began to train hard, and by the time she was sixteen, she was a strong enough runner to join the 1956 United States Olympic team. That year she and her team members won the bronze medal in the 400 meter relay. Four years later at the 1960 Olympics in Rome, Wilma Rudolph won three gold medals of her own.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 28

Interviews in the Workplace

Individual

Purpose

This exercise will give you similar information to the previous activity where you interviewed friends and family members, but now you will get important experience talking with people actually in the workplace, working at jobs that interest you, and with people you don't necessarily know.

This can sometimes be uncomfortable, but most people are happy to talk with someone just beginning their work life, and you will likely have an informative and lively interview. Be ready to answer some of their questions about what you, at this early stage in your exploration, are interested in doing for work.

Time

4 Hours

Materials

"Interview #1" and "Interview #2" handouts or notebook with a list of questions to ask and space to write the answers

Procedure

In this activity we suggest you select people to talk with who work in jobs that are interesting to you. Again, ask them what their work involves on a daily basis and what they like and don't like about it.

1. First, in the career center at your school and at your public library, read about various careers. Ask the reference librarian to help you find biographies about women in some career areas that interest you.
2. Interview at least two persons in a career area that interests you.

Interview #1

Name

Position

Organization

What do you do in your particular job?

What training and education did you receive to qualify you for your job?

What is a typical workday like for you?

How did you decide to get into this work?

What do you most like and most dislike about your job?

How would you describe your relationship with your coworkers?

What is the length of your workday?

What type of clients do you work with?

What career possibilities do you see for yourself?

If I were to go into this line of work, what advice would you have for me?

3. When you go for your interview, observe the following things about the workplace:

Geographic location

Working conditions

Physical surroundings

4. Afterwards, imagine yourself working there, and record your impressions and feelings below:

What appeals to me about this job?

What would I not like about this job?

Do I want to find out more about it?

If yes, what might be my next step?

Is this important and interesting enough to me that I will seek paying jobs or volunteer work related to this area?

Interview #2

Name

Position

Organization

What do you do in your particular job?

What training and education did you receive to qualify you for your job?

What is a typical workday like for you?

How did you decide to get into this work?

What do you most like and most dislike about your job?

How would you describe your relationship with your coworkers?

What is the length of your workday?

What type of clients do you work with?

What career possibilities do you see for yourself?

If I were to go into this line of work, what advice would you have for me?

3. When you go for your interview, observe the following things about the workplace:

Geographic location

Working conditions

Physical surroundings

4. Afterwards, imagine yourself working there, and record your impressions and feelings below:

What appeals to me about this job?

What would I not like about this job?

Do I want to find out more about it?

If yes, what might be my next step?

Is this important and interesting enough to me that I will seek paying jobs or volunteer work related to this area?

Success Story: Mary McLeod Bethune (1875–1955)

For some people, faith is the first major step toward success. That was the case with Mary McLeod Bethune, an African American woman who began her life as a pauper, rich only in dreams. In 1904, Bethune started a school for African American girls with only $1.50 in her pocket. Seeking funds for the school, she went to James Gamble, son of the founder of Proctor and Gamble. When Gamble saw the shack on the former city dump lot that was Bethune's school, he asked her, "But where is this school of which you want me to be a trustee?" Bethune answered, "In my mind and in my soul."

Twenty years later, Bethune's prospering school merged with a boy's school, and she became president of the new Bethune-Cookman Institute. Nationally recognized as a superior educator, Bethune became the only African American woman advisor to President Roosevelt when she was appointed Director of Negro Affairs of the National Youth Administration.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 29

Working with a Mentor

Individual

Purpose

What is a mentor? A mentor is a trusted counselor or guide, someone who can give you invaluable information about how they not only prepared for and found their job, but also how they expect their work life to change in the future, and how satisfied or unsatisfied they are with the choices they have made so far. You can apply what your mentor tells you about their career choices to your own decision-making process. This will help you make better decisions for yourself.

Time

2 hours per visit

Materials

"Working with a Mentor" handouts and/or a tablet of paper for taking notes

Procedure

You will meet with your mentor several times. She or he has lots to tell you and will want you to ask questions. You and your mentor will talk several times about work. By the time you are finished with this mentorship, you will know the following things about your mentor's work:

- What she or he does
- What the job conditions are like
- The future outlook for the kind of work she or he does
- How to prepare for and advance in that kind of work
- How her or his work fits into her or his personal life

The following section will give you six questions to ask, with specific things to find out about each question. We encourage you to add questions of your own! You might want to make notes on a tablet while your mentor is talking, and then rewrite them in this handout later. It will probably take several visits with your mentor for you to get all your questions answered.

Working with a Mentor

Question for Your Mentor:
What Do You Do in Your Job?

Things to find out about:

1. General job description
2. Specific tasks and responsibilities
3. Equipment and tools used
4. What is produced?
5. What else? Add your own questions here

Notes

My thoughts and feelings about what my mentor says are

Question for Your Mentor:

What Is Your Work Like?

Things to find out about:

1. Working hours (per day, per week)
2. What is a "typical day" like?
3. Work environment (noise, hazards, indoor/outdoor, travel, special clothing or uniforms)
4. How does this job fit into the total organization?
5. Unions and professional organizations
6. Salary range and fringe benefits
7. What else?

Notes

My thoughts and feelings about what my mentor says are

Question for Your Mentor:

What Is the Future for This Type of Occupation?

Things to find out about:

1. Opportunities for advancement
2. Employment projections: equal opportunities regardless of gender or race
3. Effects of technology on her or his work
4. Effects of the country's economic condition on her or his job
5. What hints would you give someone applying for your job
6. What other jobs could you do with the same skills?
7. What else?

Notes

My thoughts and feelings about what my mentor says are

Question for Your Mentor:
How Did You Get into This Job?

Things to find out about:

1. How did you get started in this occupation?
2. What other jobs have you had?
3. What skills did you gain from past jobs?
4. What personal qualities are needed for this job?
5. How does this job or occupation fit into your lifetime goals (career? A stepping stone?)
6. What else?

Notes
My thoughts and feelings about what my mentor says are

Question for Your Mentor:

How Do You Feel about This Job?

Things to find out about:

1. What do you like and dislike about your job?
2. What would you change if you could?
3. Which of your interpersonal skills do you find most valuable and why?
4. What are the attitudes and values that are important in this job?
5. Why did you choose this type of work?
6. What else?

Notes

My thoughts and feelings about what my mentor says are

Question for Your Mentor:

How Does This Job Affect Your Personal Life?

Things to find out about:

1. Family time
2. Leisure time
3. Job-related skills you use elsewhere
4. Expanding interests
5. Adequate exercise
6. General health
7. Tension and fatigue versus stimulation, fulfillment, and increased energy
8. What else?

Notes

My thoughts and feelings about what my mentor says are

Success Story: Maria Tallchief (1925-)

Pride is an important part of success. When you take pride in yourself, it is reflected in all that you do. Maria Tallchief, a ballerina who is a member of the Osage Indian Tribe, has pride in herself and her heritage. Tallchief was born on an Indian reservation in Oklahoma. And, as a girl, she liked to watch people dance. Her family moved to Los Angeles, and she began taking dance lessons. Her goal was to become a prima ballerina.

When asked if she would change her name to sound Russian, she replied, 'no.' She was proud to be an Indian and proud of her last name. Eventually, Tallchief became a member of the New York City Ballet. Her first starring role was in Firebird, a role that made her famous. In recognition of her achievements, Maria Tallchief's tribe made her a princess in 1953.

Excerpted from Going Places: An Enrichment Program to Empower Students

Activity 30

Touring the Workplace

Individual

Purpose

A tour of your mentor's workplace will be a good source of questions about her or his job and kind of work. It may also cause you to talk about some of the other jobs you may not have noticed or thought about.

Time

2 hours

Materials

"Touring the Workplace" handout

Procedure

Take the handout with you as you tour and make notes about your observations.

Touring the Workplace

1. What is the function of this workplace?

Primary purpose

Service (if a service organization)

Customers or clients

Product or service

Internal communication (such as newsletters, memorandums)

Technology used, especially computers

2. What is the support system like?

Clerical

Accounting

Mailroom

Custodial

Research

Other (e.g., media, warehouse)

3. What is the work setting like?

What is considered appropriate attire? Does it differ for women and men? Different job categories?

What do the "personal items" on desks and walls tell you about different people?

What "social functions" take place (such as breaks, group lunches) and where (coffee room, in hallway)?

Reflection

Now that you have completed one or more of the exercises in the section Set Your Own Career Goals, jot down some of your thoughts about what you have learned from the activities and the readings.

The most important thing I found out about myself was . . .

The most interesting activity was . . .

because . . .

The most interesting reading was . . .

because . . .

Has what you have learned changed what you want to do in the future?

How?

Finally

If you've done any of the activities in this book you have made progress in preparing yourself for the future. There are many things you can continue to do to help you prepare for your career.

- If you need help with your school work or with a problem, talk to your parent, a teacher, a guidance counselor, or another adult you trust. Most people like to help. Find someone who can help you.
- Join clubs and participate in hobbies related to your career goals.
- Look for summer work or become a volunteer. These activities will help teach you important skills you can use later.
- Talk with other girls who are also just beginning to make decisions about their work lives—this will help you formulate ideas and set goals.
- Look for friends who also want to have an exciting career. You can explore career interests together, share information, or even start a club.
- Revisit your goals and plans!
- You are bound to encounter gender stereotypes in your job search. Remember that you can do and be anything that you want to be, and that others who think otherwise may just need to be educated.
- Read books and watch videotapes and television programs about many different subjects—math, science, nature, interview skills, public speaking, and manners. These activities can help you feel comfortable and confident in new situations.

Remember that no journey is without stumbling blocks along the way—look at the stumbling blocks and see what you can learn from them.

The key to success is planning and preparation.

Find people who can help you reach your goals.

You can be what you want to be!

Crack the Codes Answer Key

Easy Number Codes (p. 93)

1. days of the week
2. months of the year
3. legs on a centipede
4. quarters in a dollar
5. cents in a dime
6. legs on a millipede
7. legs on a spider
8. eggs in a dozen
9. states in the United States
10. sides on a triangle
11. letters in the alphabet
12. planets in the solar system
13. stripes on the American flag
14. hours in a day
15. eyes on a face
16. legs on a human being
17. pins on a bowling lane
18. blind mice

Harder Number Codes (p. 94)

1. days in a year
2. inches in a foot
3. sides on a square
4. holes on a golf course
5. feet in a yard
6. minutes in an hour
7. cards in the deck (with the jokers)
8. angles in a triangle
9. degrees in a right angle
10. centimeters in a meter
11. wonders of the world
12. quarts in a gallon
13. months in the year
14. signs of the zodiac
15. wheel on a unicycle
16. seconds in a minute
17. keys on a piano
18. degrees Fahrenheit at which water freezes
19. dollars for passing go in Monopoly
20. digits in a zip code
21. sides on a stop sign
22. players on a football team

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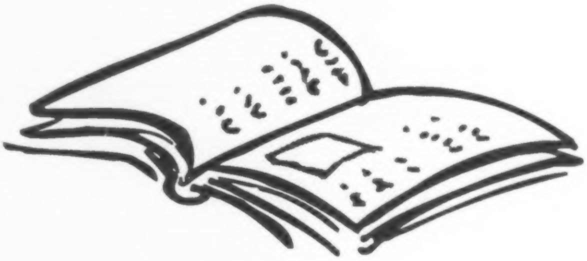
Resources

Exceptional Parent
120 State Street
Hackensack, NJ 07601
"A monthly magazine for parents and families of children with disabilities and special health care needs."

New Moon Magazine
P.O. Box 3587
Duluth, MN 55803-3587
"The magazine for girls and their dreams."



New Moon Network Publication
P.O. Box 3587
Duluth, MN 55803-3587
"For adults who care about girls."

Teen Voices Magazine
Women Express, Inc.
P.O. Box 6009
JFK Post Office
Boston, MA 02114
"The magazine by, for, and about teenage and young adult women."

Resources from the WEEA Equity Resource Center

Blackwell, Peggy. *Spatial Encounters: Exercises in Spatial Awareness,* 1982.
Conwell, Catherine R. *Science EQUALS Success,* 1990.
Faddis, Bonnie, et al. *Hand in Hand: Mentoring Young Women,* 1988.
Franklin, Margaret. *Add-Ventures for Girls: Building Math Confidence,* 1990.
Guilfoy, Vivian. *Connections: Women and Work and Skills for Good Jobs,* 1981.
Ingvoldstad, Mert. *Chart Your Course: Career Planning for Young Women* and *Building Partnerships: Career Exploration in the Workplace,* 1989.
Marks, Linda, and Harilyn Rousso. *Barrier Free: Serving Young Women with Disabilities,* 1991.
Massialas, Byron G. *Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School,* 1983.
Menard, Sharon. *How High the Sky? How Far the Moon? An Educational Program for Girls and Women in Math and Science,* 1979.
San Diego City Schools. *Going Places: An Enrichment Program to Empower Students,* 1991.
Young, Wathene. *A-Gay-Yah: A Gender Equity Curriculum for Grades 6–12,* 1992.

Organizations for Career-Related Information

American Association for the Advancement of Science (AAAS)
Education Human Resources Programs
1200 New York Avenue, NW
Washington, DC 20005
202-326-6400

American Vocational Association
1410 King Street
Alexandria, VA 22314
800-826-9972

Association for Women in Mathematics
4114 Computer and Space Sciences Building
University of Maryland
College Park, MD 20742
301-405-7892

Center for Education, Employment, and Community
Education Development Center, Inc.
55 Chapel Street
Newton, MA 02158-1060
617-969-7100

Coalition of Labor Union Women
1126 16th Street, NW
Washington, DC 20036
202-296-1200

Educational Resources Information Center (ERIC)
Office of Educational Research and Improvement
U.S. Department of Education
555 New Jersey Avenue, NW
Washington, DC 20208
202-219-2289

Educational Resources Information Center (ERIC)
Clearinghouse on Science, Mathematics, and Environmental Education
Ohio State University
1929 Kenny Road
Columbus, OH 43210-1080
614-292-6717

ERIC Clearinghouse on Adult, Career, and Vocational Education
Ohio State University
1900 Kenny Road
Columbus, OH 43210-1090
614-292-4353
800-848-4815

ERIC Clearinghouse on Counseling and Student Services
University of North Carolina at Greensboro
School of Education
Greensboro, NC 27412-5001
919-334-4114
800-414-9769

Family Math
Project EQUALS
Lawrence Hall of Science
University of California
Berkeley, CA 94705
510-642-1823

National Action for Minorities in Engineering
3 West 35th Street, 3rd Floor
New York, NY 10001
212-279-2626

The National Center for Research in Vocational Education
2150 Shattuck Avenue
Suite 1250
Berkeley, CA 94720-1674
510-642-4004

National Middle School Association (NMSA)
2600 Corporate Exchange Drive, Suite 370
Columbus, OH 43221
614-895-4730
800-528-NMSA

National Women's Law Center
11 Dupont Circle, Suite 800
Washington, DC 20036
202-588-5180

Office of Vocational and Adult Education
U.S. Department of Education
600 Independence Avenue, SW, Room 4518
Washington, DC 20202-7242
202-260-9576

Opportunities Industrialization Centers of America
3224 16th Street, NW
Washington, DC 20010
202-265-2626

School-to-Work Opportunities Office
400 Virginia Avenue, SW
Room C-100
Washington, DC 20024
202-401-6222

Skill Standards Team Office
U.S. Department of Labor
200 Constitution Avenue, NW
Room 5637
Washington, DC 20210
202-208-7018

Society of Women Engineers
120 Wall Street
New York, NY 10005
212-509-9577

Women's Bureau (national office)
U.S. Department of Labor
200 Constitution Avenue, NW
Room S3002
Washington, DC 20210
202-219-6667

Organizations for Women and Girls

American Association of University Women (AAUW)
1111 16th Street, NW
Washington, DC 20036
202-785-7700

Center for Women Policy Studies
2000 "P" Street, NW
Suite 508
Washington, DC 20036
202-872-1770

Educational Equity Concepts, Inc.
114 East 32nd Street
New York, NY 10016
212-725-1803

Girls Incorporated
National Resource Center
441 West Michigan Street
Indianapolis, IN 46202
317-634-7546

Girl Scouts of the USA
420 Fifth Avenue
New York, NY 10018
800-223-0624

National Black Child Development Institute
1023 15th Street, NW
Suite 600
Washington, DC 20005
202-387-1281

National Coalition for Sex Equity in Education (NCSEE)
One Redwood Drive
Clinton, NJ 08809
908-735-5045

National Council for Research on Women
530 Broadway
10th floor
New York, NY 10012
212-274-0730

National Education Resource Center for Gay and Lesbian Youth
Education Development Center, Inc. (EDC)
55 Chapel Street
Newton MA 02158
617-969-7100

National Organization for Women
1000 16th Street, NW
Suite 700
Washington, DC 20036
202-331-0066

Operation SMART
Girls Incorporated
30 East 33rd Street
New York, NY 10016
212-689-3700

Women's Action Alliance, Inc.
370 Lexington Avenue
Suite 603
New York, NY 10017
212-532-8330

WEEA Equity Resource Center
Education Development Center, Inc. (EDC)
55 Chapel Street
Newton, MA 02158-1060
617-969-7100
800-225-3088

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A book of fun activities and stories

. . . to help you think about careers.

Equity
Resource
Center

WEEA Equity Resource Center
Education Development Center, Inc.
Code #2772

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